Office Supreme Court, U.S.
FILED
DEC 2 0 1957
JOHN T. FEY, Clerk

No. 678

IN THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

No. 24207

TECHNICAL TAPE CORPORATION,
Plaintiff-Appellant,

v.

MINNESOTA MINING AND MANUFACTURING COMPANY,
Defendant-Appellee.

Appeal from the United States District Court for the Southern District of New York

Appendix to the Brief of Defendant-Appellee,

H. H. HAMILTON,
Attorney for Appellee

Of Counsel:

HAROLD J. KINNEY
ROBERT I. COULTER
St. Paul 6, Minn.

M. K. HOBBS
Plateville, Wis.

EDWARD A. HAIGHT
J. W. HOFELDT
Chicago 4, Illinois

PERKINS-TRACY PRINTING COMPANY, ST. PAUL, MINNESOTA
PRINTED MARCH 7, 1957

INDEX

	Page
Excerpts from Agreed Statement	1a
Excerpts from Supplemental Complaint	2a
Paul Cohen, trial testimony	3a
Paul Cohen, deposition testimony *(Defendant's Exhibit SSSS)*	12a
Edward C. Lake, trial testimony	24a
Ralph C. Schilly, trial testimony	32a
Defendant's Exhibit VVVV—*"An Analysis of the Use of Moistureproof Cellophane Adhesives According to Industries"*, report dated December 15, 1930	44a
Defendant's Exhibit WWWW—letter dated December 1, 1930 from Minnesota Mining to DuPont	49a
Defendant's Exhibit XXXX—letter dated January 21, 1931 from DuPont to Minnesota Mining	50a
Jacob P. Glaser, trial testimony	51a
Neil S. Beckwith, trial testimony	55a
Gerald W. Kelleher, trial testimony	62a
A. E. MacAdam, trial testimony	67a
Alfred W. Logan, trial testimony	73a
Charles O. Moosbrugger, trial testimony	77a
Frank N. Manley, trial testimony	80a
Defendant' Exhibit MMM—Johnson & Johnson report dated April 17, 1935	83a

Page

Defendant's Exhibit UUU—Industrial Tape Corporation letter dated April 24, 1939 ..... 84a

Charles C. Smith, trial testimony 86a

Defendant's Exhibit MMMM—"*Net Sales and Credits for Transparent and Colored Pressure-Sensitive Film-Backed Tape (Mostly Cellophane Tape) November, 1930 through December 1941*", report dated October 20, 1954 ..... 89a

Defendant's Exhibit NNNN—"Scotch" Cellulose Tape, Total Advertising Expenditures..... 91a

Charles C. Smith, trial testimony 92a

John J. Bennison, trial testimony 101a

Charles Lloyd Arnold, trial testimony 103a

Elizabeth Arnold, trial testimony 116a

Plaintiff's Exhibit 142—deposition testimony of Eli Ackerman and R. V. Arvey 119a

Plaintiff's Exhibit 144 — deposition testimony of Samuel S. Rosendorf, Jr. and Allen B. Cammack 126a

Plaintiff's Exhibit 145 — deposition testimony of Seymour H. Rosenblatt 135a

Plaintiff's Exhibit 40 — deposition testimony of Abraham Trachtenberg 142a

Plaintiff's Exhibit 42 — deposition testimony of Albert S. Drew 150a

Ernest R. Hanson, trial testimony 156a

Paul Shalita, trial testimony 157a

Richard G. Drew, trial testimony 217a

Page

Plaintiff's Exhibit 28 — deposition testimony of Richard G. Drew 243a

Colloquy 244a

Hubert J. Tierney, trial testimony 246a

Plaintiff's Exhibit 28, deposition testimony of H. J. Tierney 265a

Kenneth E. Penney, trial testimony 268a

Hubert J. Tierney, trial testimony 273a

Paul Shalita, trial testimony 273a

Plaintiff's Exhibit 181-T — Durex Opposition to Rado German Application 75,969 ..... 275a

Plaintiff's Exhibit 189-T — Durex Opposition to Rado German Application 75,969 ..... 276a

Plaintiff's Exhibit 190-T — Durex Opposition to Rado German Application 75,969 ..... 277a

Plaintiff's Exhibit 191-T — Rado German patent application 76,554 ..... 279a

Plaintiff's Exhibit 193-T — Opposition brief of Minnesota to Rado German application 76,554 ..... 279a

IN THE

UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

No. 24207

TECHNICAL TAPE CORPORATION,
Plaintiff-Appellant,

v.

MINNESOTA MINING AND MANUFACTURING COMPANY,
Defendant-Appellee.

Appeal from the United States District Court for the Southern District of New York

---

Appendix to the Brief of Defendant-Appellee

Excerpts from Agreed Statement (Deft's. Exhibit B):

• • • • • • • • • •

5. Tech. Tape admits that, prior to the time the complaint was filed, it made, used and sold transparent non-fibrous film-backed pressure-sensitive adhesive tape having the following construction:

(a) a backing of cellophane, which is a transparent, flexible, non-fibrous film backing having smooth, lustrous surfaces;

(b) an adhesive coating prepared from rubber and resin which is normally tacky and pressure-sensitive, is water-insoluble, is firmly bonded to the backing, and is non-offsetting, and is transparent and flexible, the back surface of the backing being inactive to the adhesive coating to a degree permitting unwinding of the tape from the roll without delamination or offsetting of adhesive;

(c) a primer coating interposed between the backing and adhesive coating and firmly bonding the adhesive coating to the backing, the primer coating being transparent and flexible.

* * * * * * * * * *

7. Tech. Tape further admits that it also has manufactured, used and sold tape constructed like that described in paragraph 5, with coloring matter added to the adhesive which is visible through the backing.

* * * * * * * * * *

9. Tech. Tape further admits that, prior to the time the counterclaim was filed, it has manufactured, used and sold tape constructed as described in paragraph 5, except that the adhesive coating is prepared from polyvinyl ether rather than rubber and resin.

Excerpts from Supplemental Complaint:

* * * * * * * * * *

8 (c). Defendant has brought suit in the District Court of the United States in Chicago, Illinois, against a number of parties for infringement of the said patent No. 2,177,627

by reason of the manufacture and/or use and/or sale of pressure-sensitive adhesive tapes and sheets substantially identical with or not materially different from those manufactured and/or used and/or sold by plaintiff herein. These suits are identified as follows:

Minnesota Mining & Manufacturing Company v. Pax Plastics Corp., et al, Civil Action 45 C 846, reported at 65 F. Supp. 303; Minnesota Mining & Manufacturing Company v. International Plastic Corporation et al, Civil Action No. 44 C 202, reported at 62 F. Supp. 34 and at 159 F. 2d 554; and Minnesota Mining & Manufacturing Company v. Neisner Bros., DC, ND, Ill., ED Civ. Action No. 51 C 1789, filed November 7, 1951.

Testimony of **Paul Cohen**, called as an adverse witness by Minnesota:

Direct Examination

By Mr. Haight:

68 Q. Will you state your name, please. A. Paul Cohen.

Q. And you are the president of Technical Tape Corporation, the plaintiff in this case? A. Yes, sir.

• • • • • • • • • • •

74 Mr. Haight: Now, Defendant's Exhibit G for identification, Mr. Morris, is one of those that you furnished to us, made with synthetic adhesive, which I think you can probably identify.

Mr. Morris: Well, ask Mr. Cohen about it. I really do not know those things apart.

• • • • • • • • • • •

77 Q. I now show you two rolls of tape, one marked Defendant's Exhibit I for identification, which is of ¾ inch width and 200 inches long; and the other marked for identification as Defendant's Exhibit J. which is ¾ inch, 400 inches long, and ask first do you identify those as
78 cellophane tape manufactured and sold by Technical Tape. A. Yes, I do.

Q. Can you identify as to each what the type of adhesive is? A. I will endeavor to do so. Without being absolutely certain, I believe that this is the rubber type (indicating).

Q. That is Defendant's Exhibit I for identification, is that correct? A. Yes, sir.

Q. Now as to Defendant's Exhibit J. A. This I believe to be the rubber type, too.

• • • • • • • • • •

79 Q. And does the person who orders from you, or has such a person to your knowledge in any instance specified the adhesive that person desires? A. Not to my knowledge.

Q. That is to say the ingredients of the adhesive. A. Not to my knowledge.

• • • • • • • • • •

81 The Court: I notice that this last exhibit for identification contains two exhibits of identical size.

The Witness: Yes.

The Court: Would you pack the plastic adhesive type and the rubber adhesive type indiscriminately in a box?

The Witness: Normally you would not mix the two.

82 The Court: But you make no point of keeping them separate, do you?

The Witness: Not unless there was some specialized purpose.

• • • • • • • • • • •

Q. I now show you a can which purports to be "Tuck" Cellophane Tape, ½ x 2592, two rolls. It contains two rolls of a light green tape, and I ask you if you can identify that as product made and sold by Technical Tape. A. No, I cannot so identify it. It does not have our printing on the core. It may be our tape, but it doesn't have our printing on the core and I cannot be sure as to these rolls.

83 The Court: Is that the only way you have been able to make identification of the product, by the printing that appears on the core?

The Witness: Yes.

The Court: Absent the core and just being shown the product and upon an examination of the product itself you cannot identify it as your product?

The Witness: No, it has a blank core and I would find it very difficult to distinguish our tape from the others. In handling the roll of tape I can, once we are assured it is our tape, I can tell by the unwinding characteristics of the tape because there is a rachety sound which is characteristic of the synthetic type adhesive. On other rolls or other types it would be the transparency of the product, the plastic being all synthetic and clearer, and that is sometimes visible. That is the method that I would try to use in distinguishing.

The Court: But if you have a rubber-resin adhesive, can you distinguish your product from that manufactured by any other company?

The Witness: No, I couldn't tell with any degree of certainty that a given piece of tape or tape which is labeled

with the core removed, whether it was our type or
84 Minnesota Mining's or the Industrial Tape Corporation's, which is a manufacturer in New Jersey and a licensee of Minnesota Mining.

• • • • • • • • • • •

86 Q. Now I have in my hand just a strip of cellophane tape, transparent, about seven or eight inches long, and ½ inch in width, I believe, and as I understand it, you cannot tell by looking at that whether you made it or 3M made it or what the ingredients of the adhesive are, is that correct? A. No. I could offer you a reasonably good guess that this is plastic adhesive of our manufacture or Minnesota Mining's manufacture. I could not tell which of the companies. Well, I don't know if Industrial Tape Corporation has ever made a plastic adhesive, but if I were to be given a strip or being given this strip I would say that this is probably plastic tape adhesive of the
87 synthetic type as we have referred to it here, but I could not tell you who made it.

• • • • • • • • • • •

94 Q. Now I will read from page 26A of the record on appeal in this case, from your affidavit as follows:

"Since about two years"—and you perhaps want to follow this—"Since about two years prior to November 17, 1951, the defendant corporation was informed by me on various occasions that Technical Tape Corporation, even if it did not obtain a license from defendant, would manu-
95 facture and sell pressure-sensitive adhesive tape or a type which I was advised by Mr. Hirschman, would be regarded by defendant as an infringement of their Drew patent No. 2,177,627, in view of the position taken by the defendant in the several suits for infringement brought by defendant under such patent."

A. Yes.

Q. You so swore, didn't you? A. Yes.

• • • • • • • • • • •

Redirect Examination

By Mr. Haight:

108 Q. So that for more than two years before this suit was filed, you had advised Minnesota Mining that you were going to make a pressure-sensitive cellophane tape whether they gave you a license or not? A. We so advised them.

Q. Regardless of whether you could get a license? A. We so advised them.

• • • • • • • • • •

Testimony of **Paul Cohen,** recalled as a witness by Technical.

• • • • • • • • • •

(Record pages 2979 et seq.)

Cross Examination

By Mr. Haight:

2979 Q. Mr. Cohen, you have many, many, many jobbers or distributors who also handle Minnesota Mining products, don't you? A. Yes.

2980 Q. Thousands, don't you? A. We have, I think, 3,000 active accounts. I would say that in the wholesale paper merchant category there might be several hundred. I couldn't give you the exact figure, Mr. Haight. This was the category to which I was referring.

Q. You have several hundred in that specific category? A. Yes.

Q. And of those several hundred in that category, how many of them are also Minnesota distributors? A. I can't say exactly. I might offer the estimate that the major part

of them probably sold Minnesota Mining tapes, at least up to that period of time where this pattern began.

• • • • • • • • • • •

2985 Q. You don't distinguish on the word distributor jobber, you aren't drawing any distinction there, or do you draw a distinction between distributor and jobber? A. No, in the answer I had given you, Mr. Haight, a jobber and a distributor is about the same.

Q. All right. Aren't there accounts of yours who purchased "Tuck" tape for resale right in New York City itself, and Brooklyn, who also handle Minnesota Mining products? First I will ask, aren't there such? A. Which
2986 type of distributor?

Q. Well, paper companies and so on, stationers. A. I would guess that there are some, but I am not certain; I would just offer as a guess that there probably are some.

Q. As a matter of fact, there are over a hundred, aren't there? A. Oh, we don't have a hundred distributors in this area. Minnesota may have, but we don't, not to my knowledge.

Q. Who would be best informed on that? A. I guess there are records that we — I could make myself better informed if you desire.

Q. I wonder if I gave you a list could you have someone check that to see if you sell to any of these people? A. Yes, sir, I could do that.

Mr. Haight: I will mark the original of that as A-5.

Q. I will give a copy of that to you. It is entitled, Distributors New York Area Presently Handling Both Scotch and Tech Brand Tape.

• • • • • • • • • • •

3701 Q. Mr. Cohen, on this jobbers list, you recall that you stated you could determine, at least in some instances, whether these jobbers were jobbers or distributors of 3M, as well as Tuck. Now do I take it that in all instances you found them to be distributors of 3M where they were also distributors of yours? A. No, we were not able to determine it in all cases.

Q. In most cases was that true? A. I can't tell
3702 because in many cases our records did not show and inquiries were not responded to with sufficient detail that I could be sure.

• • • • • • • • • •

Q. And just glancing at this list, which is a copy of our Exhibit A-5 for identification, I notice the check indicates that Tuck is selling to the particular jobber and that "F" indicates not selling, and I notice that there are appreciably more checks than there are X's. A. Well, I think
3703 I should explain this to you. As I recall there were —there is 136 names here, and when I said, "Not selling", I meant not selling currently.

Q. All right. A. And describing currently by searching our records to determine those to whom we sold or did not sell in the period to which our records are now closed—October, November and December of that year, and in that quarter, among those names, 136, we found 79 whom we are selling, and 57 whom we apparently have sold but are not currently selling.

Q. But as to all of them, you are either selling or did sell at one time? A. At one time we apparently sold all of them.

Q. Now, you testified before that you could check from your records as to whether they were also distributors for

3M. Did you have that check made? A. We had that check made and find that most of them are or were distributors for 3M, but I could not answer for everyone, because in many cases the distributors would not disclose the information, but I would say—I think I am correct in saying that most of them, most of them, the great majority were or are 3M distributors.

• • • • • • • • • • •

3704 The Witness: I do believe that almost all, if not all, are or were 3M distributors. I just say our records are incomplete, but for all we did find and where there was information, they were 3M distributors. It is just that I did not have it in each and every case, but I do believe that all of that list—that you are correct, that those 136 accounts all or very close to all had handled "Scotch" tape.

Mr. Haight: Well, I think that is probably enough.

The Court: And 79 of that 136 you know definitely currently handle "Tuck" tape?

The Witness: Yes. Our records indicate that we have in the past sold these same 136 accounts and are con-
3705 tinuing to sell 79 of them. It seems that the others have escaped from the fold in this period that we checked.

• • • • • • • • • • •

3706 The Witness: I might also say it is possible that some of these 57 accounts may purchase again sometime next year. It is very unusual for a distributor to draw a blank purchase for a three-month period. It is possible that one or two or so may come back. I can't say. But no orders have been forthcoming. Normally we expect a
3707 distributor within a quarterly period to purchase at least once, but this has not occurred.

The Court: But the fact that 55 of the 57 to whom you didn't make any shipments during this last month period, didn't make purchases from you, has no significance as far as 3M is concerned, as far as you know?

The Witness: As far as I can definitely say it has not, your Honor. I cannot state so with any definiteness.

Mr. Haight: I will ask that the list be marked as Defendant's Exhibit J-5 for identification, I believe it is. That is a duplicate of A-5, except it has the check marks on it.

* * * * * * * * * * *

3712 Q. Mr. Cohen, you said that you had other distributors in the area covered by the exhibit for identification J-5 and among those other distributors in this area there are also some who handle 3M products
3713 also, aren't there? A. Yes. You mean 3M has additional distributors other than these?

Q. Yes. A. Oh, yes, I am sure they have.

Q. And some of those additional distributors also are distributors of "Tuck" products? A. I would have to do another checking job, as I have done here.

Q. But so far as you know, you have—I will put it this way broadly: You know that you have many more distributors who are also distributors of 3M than are shown on this list which you checked? A. I couldn't say many more; there are some more, I believe. I think there would have to be. I don't think your own sales force described a method you collected; it could be that comprehensive. There must be some more. I would have to do a much more exhaustive job to be accurate.

Q. That is true not only in this area covered by this exhibit but in other parts of the country also? A. Yes,

there are distributors who handle both lines in other parts of the country.

• • • • • • • • • •

Excerpts from Defendant's Exhibit SSSS, the testimony of Paul Cohen in another action, introduced in lieu of putting Mr. Cohen on as a witness on the matter involved, and introduced in full at the request of plaintiff's counsel: see transcript 1260-1263.

(Page numbers at left refer to pages of deposition transcript.)

Direct Examination

By Mr. J. Howard Carter:

2 Mr. Carter: For record purposes, may we consider marked in evidence as Plaintiff's Exhibit 1 a copy of Justice Eager's order issued out of this Court on the 13th day of September, 1954, permitting within the limits of that order, the examination before trial of the defendants.

The Referee: Yes, it is so marked.

Q. You are Mr. Paul Cohen? A. Yes.

Q. And what is your addres , sir? A. 197 Sutton Manor, New Rochelle.

3 Q. What is your business or occupation? A. I am chairman of the Board of Technical Tape Corporation.

Q. What business is Technical Tape Corporation in? A. Technical Tape Corporation is a manufacturer of paper and plastic products.

Q. Would you say Technical Tape Corporation manufactures and sells pressure-sensitive adhesive tapes? A. Yes it does.

Q. Is Technical Tape Corporation a New York corporation? A. Yes, Technical Tape is a New York corporation.

Q. When was it formed? A. In the middle of September 1948.

Q. Forty what? A. Forty-seven.

Q. Were you one of the original incorporators? A. I believe I was.

• • • • • • • • • •

Q. Initially, after the incorporation, did you hold an executive office in it? A. Yes I did.

Q. What office was that? A. I was the president.

• • • • • • • • • •

Q. Was Paul Shalita connected with the Technical Tape Corporation initially? A. Yes he was.

Q. In what capacity? A. He was the head of laboratories.

Q. Is he a technical man? A. Yes.

• • • • • • • • • •

Q. Have you had the benefit of any technical education? A. No I have not, just undergraduate courses of a technical nature. I wouldn't consider myself a technician.

Q. Did you study any chemistry? A. Very little bit.

• • • • • • • • • •

Q. Had you know Paul Shalita for some time prior to 1947? A. Yes I had.

• • • • • • • • • •

Q. Can you tell us whether or not prior to 1947 Paul

Shalita had ever made or manufactured any pressure-sensitive adhesive tapes? A. Yes he had.

8 Q. Where? A. At two companies, the Cofax Company, and at a company called Melplast, which was a successor to Cofax, as I am informed.

• • • • • • • • • •

16 Mr. Carter: I can save you some time in overcoming Judge Close's objection by stating I refer to U. S. letters patent No. 2,177,627 which is commonly known at the cellophane tape patent or Drew patent.

The Referee: All right, you may answer.

A. I would like a clarification by what you mean 'have access to'?

Q. Did you look at it? A. Yes I looked at it.

Q. Did you analyze it? A. Yes I analyzed it.

Q. In analyzing and looking at it, what purpose did you have in mind?

• • • • • • • • • •

A. I would say, sir, that I looked at that patent on probably one hundred different occasions with all different sorts of purposes in mind. There was a time early in business, when I perused several hundred pressure-sensitive adhesive tape patents merely for information purposes, with nothing in mind except to read what was there. There were other times I read it with different purposes in mind. I think I find it difficult, but if you wish me to, on each such 17 occasion I will tell you to the best of my knowledge what I had in mind.

Q. We weren't referring to the hundreds of other times you may or may not have looked at the patent; I believe my

question was addressed to 1947? A. You said 'or thereafter'.

Q. Let's speak of 1947 now. When you looked at the basic patent you testified, I believe, you were looking for information? A. Yes, just for information.

Q. Were you looking for manufacturing know-how? A. I wouldn't say I was looking for anything, merely awareness of what was patented at that time.

Q. What information were you looking for when you analyzed the basic patent? A. I merely wanted to be aware of what patents were in the field. Suppose we were to run into some interesting development—I would want to know if someone had previously patented it. It was my duty to know what the patents were.

Q. Did the basic patent cover the method of manufacturing cellophane tape?

• • • • • • • • • •

A. Yes.

Q. Well, now, when you looked at it initially in 1947 18 did you discuss it with Shalita? A. No.

Q. Did you ever discuss the basic patent with Shalita? A. Yes, some time thereafter.

Q. When? A. I can't pinpoint that.

Q. Approximately? A. There were many discussions with Mr. Shalita.

Q. About the basic patent? A. Yes.

Q. Generally speaking, what was the nature of those discussions? A. Generally, the nature of those discus-

sions were discussions as to our appraisal of the validity of that patent.

• • • • • • • • • • •

22 Q. Mr. Cohen, approximately when was it that Technical Tape Corporation actually got into production? A. It was in the spring of 1948.

• • • • • • • • • • •

23 Q. Now, generally speaking, your first production effort was masking tape, was it not? A. Yes.

Q. Did you make masking tape throughout the years 1948, 1949 and 1950? A. Yes.

• • • • • • • • • • •

31 Q. Did there come a time in 1951 when you or you and Shalita decided to augment the company's technical staff? A. Yes.

Q. When was it that that decision was arrived at?

A. About the turn of the year 1950-1951, some time around that.

Q. Did you discuss that proposed course of action with
32 Shalita? A. Yes, we discussed it.

• • • • • • • • • • •

33 Q. I will be much more specific in future questions. Is it fair to state that at the time you and Shalita had this conversation, Technical Tape had been producing pressure-sensitive adhesive tapes for approximately two years and nine months? A. Approximately that, yes.

Q. Up to that point had Technical Tape manufactured, produced and sold for commercial consumption any cellophane pressure-sensitive tape? A. No.

Q. Had Technical Tape indulged in any research on

the method of manufacturing and producing cellophane pressure-sensitive tape? A. Yes.

Q. Was that research conducted by Shalita? A. I believe it was. It was conducted in the laboratories under his general supervision. I don't know which personnel did it, but it was under his supervision.

Q. As of the late winter or early spring of 1951 did Technical Tape have plans to enter the manufacture, production and sale of cellophane tape? A. Yes.

. . . . . .

34 Q. Now, do you know the defendant Frederick C. Beyer? A. Yes.

Q. When did you first hear of Beyer? A. I can't recall when I first heard of Beyer.

. . . . . .

35 A. I am trying to refresh my memory on it for you. As I recall, this discussion took place shortly before I met Fred Beyer. I met him to the best of my recollection about I would say the late spring of 1951, and Mr. Lux and I discussed Mr. Beyer just before that time.

Q. Well, now, who initiated this discussion about Beyer, you or Lux? A. I don't recall.

. . . . . .

47 Q. At the time you gave Lux the green light to contact Beyer for your purposes, you knew that Beyer was the assistant quality control supervisor of the 3M Company at their Bristol, Pennsylvania plant? A. No, I didn't know his title. I knew he was in quality control working in Bristol.

Q. For the 3M Company? A. Yes.

Q. When was it that you first saw Beyer? A. Sometime towards the end of March or early April of 1951.

Q. Where were you when you saw him? A. At my home.

• • • • • • • • • •

49 Q. So you want us to understand that as of that night in your home as of late March or early April, you consummated an employment agreement, oral or otherwise, with Beyer to come to work with Technical Tape? A. Yes.

Q. It was the first time you saw him? A. Yes.

• • • • • • • • • •

50 Q. Did he tell you he was a graduate of the University of Minnesota? A. Yes.

Q. Told you he had a degree in chemical engineering? A. I don't recall.

• • • • • • • • • •

51 Q. Was there any mention of Beyer's contribution to the improvement of the quality and production methods of
52 the 3M products? A. His contribution?

Q. Yes. A. Yes, he said he was capable at that, and had done that work very well.

• • • • • • • • • •

Q. Did he tell you that he was the assistant chief supervisor of quality control at the Bristol plant? A. Again, I can't recall the title. He told me, I think he said he was in charge of quality control, I don't recall the word assistant, he was highly experienced, and at various times during the operation of the plant, he was responsible.

• • • • • • • • • •

55 Q. You know of the existence of a so-called restrictive technical agreement that Minnesota had with its key em-

ployees? A. I didn't know it until I interviewed Beyer.

56 Q. When did you first find out that such an agreement existed? A. I think Beyer was the first one to tell me he had such an agreement. I didn't know at any time it was a general agreement.

• • • • • • • • • • •

Q. What did he tell you about it? A. He told me he had a technical agreement, and described the nature of the agreement.

Q. What did he describe about it? A. He had an agreement which prevented him for a period of time after termination of his employment with Minnesota Mining with working for a competitive company.

Q. What did you say? A. I said I would phone our lawyer and ask him whether such a contract would be binding upon either of us.

The Referee: Did you regard yourself as a competing company? A. Yes I did.

• • • • • • • • • • •

57 Q. So you want us to understand that Beyer told you the only restriction contained in this technical agreement was one against working for a competitor for a year after he left the 3M Company? A. Beyer did not say that was the only condition. He said he had an agreement and the agreement contained a clause which prevented him from working for a competitive company for a year after his termination of employment with Minneesota Mining. He didn't say there was nothing else in the agreement.

58 Q. That indicated to you there was some restriction on Beyer's services? A. Yes, it indicated there might be.

• • • • • • • • • • •

63 Q. You knew as a business man, did you not, back in 1951 that Minnesota took great pains to protect its secret formulas and processes, didn't you? A. I did not.

Q. Did Beyer acquaint you at any time with the security provisions in effect at the Bristol plant of the 3M Company? A. He did not until after this litigation was started.

• • • • • • • • • •

The Referee: What did you think the purpose of the 3M Company to exclude a former employee from engaging in employment with a competing company, was? A. My opinion, sir?

The Referee: What was the reason for their making such
64 a contract, that you are not to work for a competing company; there must have been something behind it to activate such an agreement.

• • • • • • • • • •

68 Q. As of 1948 and the end of 1952, you hadn't sold one foot of pressure-sensitive cellophane tape, had you, not one foot? A. As of when?

Q. As of late 1951? A. No, we sold cellophane tape in 1951.

Q. When? A. As I recall it, our first sales were October or November of 1951.

Q. That was your first venture into the cellophane tape field? A. First sales.

Q. That was your first venture, that was a few months after Beyer came with you? A. Yes it was.

Q. When you were talking to Beyer after this litigation started, about the security or lack of security that the 3M

Company took to protect its trade secrets, did he tell you these standard books allegedly lying around were all in code? A. Yes he did.

• • • • • • • • • • •

69 Q. Did he tell you those many people who had access to the standards book in code form were key men like himself?

A. They were available to anyone in the plant to go and look at them.

Q. Who understood the code? A. I believe so, apparently.

• • • • • • • • • • •

70 Q. Was there any agreement between you and Beyer that night as to the amount of notice that would be reasonable to the 3M Company, and when he would go to work for Technical? A. No there was not, there was no emergency situation involved. It was a matter, he would go back, and there would be two, three or possibly four weeks.

• • • • • • • • • • •

71 Q. Up to that time as far as you know, had Beyer and Shalita ever met? A. I don't think so.

• • • • • • • • • • •

Q. In any event, you discussed with Shalita his employment, you think the following month? A. Within the next few days. I told Paul I knew him to be experienced in quality control in Minnesota Mining, and he had been interviewed by me and I thought his qualifications were good, and I had hired him to head our quality control department.

• • • • • • • • • • •

72 Q. Did you tell Shalita this man was coming to you from the 3M Company? A. Yes.

Q. Did you tell Shalita what qualifications Beyer said he had? A. I told Shalita that he had had good quality control experience at Minnesota Mining.

• • • • • • • • • • •

73 Q. When did he come to work for the company? A. I think that date was May 28th.

Q. 1951? A. 1951.

Q. That was approximately seven or eight weeks after you had talked to him initially, wasn't it? A. I think it was about six weeks.

• • • • • • • • • • •

74 Q. Did you have any communication with him directly or indirectly during that period? A. I think there were either one or two telephone conversations.

Q. Between you and Beyer? A. Yes.

• • • • • • • • • • •

Q. Did he tell you that he had falsely stated to the 3M Company that he was going to work for a paper company? A. No, he did not.

75 Q. When did you learn that for the first time? A. I learned for the first time that he had stated that after this litigation started, although—

Q. Are you finished? A. Yes I am finished, although I had suggested to him to tell the 3M Company that he was going to work for a paper company, but I didn't know he had done it until after this thing started.

Q. When did you tell that to Beyer? A. At the time of the interview as best as I can recall.

Q. In other words, at your home that night in late March or early April after you hired Beyer, you had suggested to

Beyer that he tell the 3M people that he was going to work for a paper company? A. Yes.

• • • • • • • • • • •

76 Q. As I understand it, you suggested to Beyer that he falsify to the 3M Company for that reason? A. We were essentially a paper manufacturing company.

The Referee: Is a business such as yours known in the manufacturing world? A. It is in the general field, we convert paper into paper tapes, and generally this is a paper company.

Q. Is plastic tape a paper product? A. No, we were selling it through the paper company.

Q. When Beyer called you on the telephone, or you called him on the occasion we were discussing before, did he tell you that he had carried out your suggestion and told the 3M people he was going to work for a paper company, whose name he gave them? A. This I do not recall.

Q. Did you suggest to Beyer the name of the paper company he gave to the 3M? A. I might have.

Q. What name did you suggest? A. Lloyd's Paper.

Q. They don't make any kind of pressure-sensitive tape? A. No.

Q. Never did? A. No they did not.

Testimony of **Edward C. Lake**, a sales manager in the Film Department of duPont, called by Minnesota.

(Record pages 965 et seq.)

Direct Examination

By Mr. Haight:

965 Q. Will you state your name, please. A. Edward C. Lake.

Q. Where do you live, Mr. Lake? A. Hockessin, Delaware.

Q. What is your occupation? A. My occupation is manager converter sales film department, E. I. duPont de Nemours & Company.

Q. How long have you been connected with the duPont Company? A. Since August, 1924.

Q. At that time what were your duties? A. My duties as a salesman with headquarters in Boston.

Q. Then can you just quickly give us a summary of what you have done since then with the company, Mr. Lake? A. Then from Boston within a year I came to New Jersey, was salesman there, then as special representative working with salesmen in the field, then as New York district manager, then as assistant director of sales, and that brings me up to my present position.

966 Q. Now, during all that time what product or products have you been dealing with? A. Cellophane the entire time, and more recently the newer films.

Q. Back when you were first employed in 1924 how many salesmen were then selling cellophane for duPont? A. There were eight original salesmen and I was one of them.

Q. And you were one of the original salesmen, one of the original eight? A. That is right.

Q. At that time in 1924 was there any other company in the United States selling cellophane? A. Yes, there were two or three brokers I believe, or jobbers.

Q. Would you please explain what you mean by brokers? A. Well, a broker is a person who buys cellophane and resells it. You might call him a jobber.

Q. They did not buy it from duPont? A. No, they imported the film.

Q. Were you personally familiar with cellophane at any time prior that you started to work for duPont?
967 A. Why, yes, but only in the way of buying packages wrapped in it, such as boxes of candy and cosmetics occasionally.

• • • • • • • • • • •

Q. Now, when you started selling cellophane in 1924 what were the uses then made of the cellophane, if you know, by your company? A. Well, there were uses already established with high grade boxes of candy and cosmetics and perhaps a very few pharmaceuticals.

968 Q. What type of cellophane was duPont selling in 1924, Mr. Lake, when you came with the company? A. Plain transparent cellophane only.

Q. And when did the moistureproof cellophane come on the market? A. The moistureproof came on the market in 1927.

• • • • • • • • • • •

969 Q. Now, can you tell us how your customers in general sealed packages first in 1924 using the plain transparent cellophane? A. Well, when I first went to

New England in 1924 I found it a very common practice among the candy manufacturers of using a sponge with water that did not give a satisfactory seal. However, it was used. Then usually some gum labels were put on the end. Then later they started to use a gum arabic solution.

Q. When the moistureproof cellophane become available, how was that sold? A. Well, that was in 1927. We did not have any satisfactory adhesives. Do you refer to the time when we introduced the moistureproof cellophane?

Q. Yes, right at the time that you introduced the moistureproof cellophane. A. Well, I might say that I was delegated the job of introducing the moistureproof cellophane to the trade in 1927 in cooperation with the salesmen.

• • • • • • • • • • •

970 The Witness: I said that in 1927 I was delegated the job of introducing the moistureproof cellophane in cooperation with the salesmen to the trade, and the prospective customers were those to whom we had tried to sell, many of them, cellophane but whose product required protection from moisture loss or absorption and, of course, PT--plain transparent film did not produce that quality so that we tried to demonstrate the keeping qualities of the moistureproof, of this new moistureproof cellophane by taking a product such as a cake or part of a cake, or a cut cake that you want to keep fresh, and you would overwrap the cut cake or the piece of cake usually by using a confectioner's fold or a druggist's fold, turning it down, and then pulling underneath and using a band, an elastic band to hold the cellophane close to the product, and then advising the customer to observe the condition of the cake every day, or every two or three days, or the following week, to verify our claim that we had a moistureproof film.

Q. Did you have any adhesive at that time when you introduced the moistureproof cellophane? A. Not to the best of my knowledge.

971 Q. That is, no satisfactory adhesive for it? A. That is correct.

Q. Did you finally get such an adhesive? A. Yes, I believe that it was early in 1926 when we produced cellophane on a semi-working machine, that is, moistureproof cellophane on a semi-working machine that we sent samples of, sent samples of that film to adhesive manufacturers to find out if they had an adhesive that would properly adhere, and in due time we got replies back indicating that there was no adhesive satisfactory for the purpose. Later, I don't know just what date, we and the company tried to develop an adhesive.

Q. Now, was an adhesive then developed? A. Was an adhesive then developed was your question?

Q. Yes. A. Yes, there were some adhesives developed. We developed two or three but they fell far short of being satisfactory.

Q. What were the deficiencies? A. Well, they all had an odor and they all took considerable dwell time for the tacking, or for it to take hold.

972 Q. What do you mean by "dwell time", Mr. Lake? A. Well, that is the length of time that it takes for the adhesive to take hold or whatever means of adhesion you are applying.

Q. Were those adhesives employed with food products, for example, where the smell would be noticeable? A. Yes. As a matter of fact, it is usual on food products that you

use moistureproof film where there is protection needed for moisture loss and absorption.

Q. Well, how did they seal their packages generally in the food industry? A. Well, in those days as I remember it they started out by—oh, for instance, packaging cup cakes or a cake, and then they would use essentially the confectioner's fold or the druggist's fold and connecting the end folds underneath or up on the sides, and then taking a band, a paper which was usually branded for identification, an adhering band and holding the cellophane on the package in that manner.

Q. Were there any difficulties in using the paper band around the package to hold the fold in place? A.
972a Yes, there were considerable difficulties.

Q. What were they? A. Well, that band had a tendency to slide off and many of them did slide off.

973 Q. Did you subsequent to that time learn of a satisfactory method of sealing the moistureproof cellophane? A. Yes.

Q. What method or methods did you later learn of? A. There were some improvements in adhesives but we heard of course of "Scotch" tape or pressure-sensitive tape. That was—that came into being.

Q. When did that "Scotch" cellophane tape come to your attention? A. It first came to my attention in 1930 or 1931.

Q. And could it be used to provide a satisfactory seal for the moistureproof cellophane? A. It could, very satisfactory.

Q. Was it so used? A. It was so used.

Q. What effect if any did the advent of the transparent pressure-sensitive cellophane tape have on the business of your company? A. Well, it provided a new market for cellophane, in the amount that was used in the tape itself, the backing material, and it also provided a simple and very attractive means of closure for users, and it was always thought that it influenced the sale of cellophane.

974 Q. Could it be used both with the plain transparent and with the moistureproof cellophane? A. It could.

Q. And was it so used? A. It was.

Q. Did duPont bring out a moistureproof cellophane that could be heat-sealed? A. Yes. We introduced a moistureproof cellophane, a heat-sealed moistureproof cellophane in 1932.

Q. Mr. Lake, I am showing you a document which has been marked for identification as Defendant's Exhibit XXX. At pages 119 to 121 there appears what purports to be an affidavit of Edward C. Lake. I ask you if that is your signature that appears there on page 121. A. It is.

Q. Now in that affidavit, on page 120, there is a paragraph at the bottom of the page, and I will read it:

"'Scotch' cellulose tape filled an existing need when it appeared in the latter part of 1930, and was immediately accepted in the trade. It provided an attractive seal for packages wrapped in moistureproof cellulose film, the
975 transparent tape being clear and the colored tape having an attractive glossy colored appearance. It could be readily applied, without moistening or other activation, stuck firmly, and yet could be peeled off without leaving a residue. The 'cellophane' sales organization of the duPont company was pleased when the 'Scotch' cellulose tape appeared, not only because it provided a new market for 'cellophane' cellulose film, but because users of moisture-

proof cellulose films for wrapping purposes were provided with an attractive and effective quick-sealing tape for hand sealing thereof."

You took oath to that in December 1938, is that correct? A. I think that is right.

Q. And your views in that regard, have they changed? A. No.

Q. And on the top of page 121 of Exhibit XXX this paragraph reads:

"To the best of my knowledge and belief, prior to the appearance of the 'scotch' cellulose tape, there was no transparent pressure-sensitive adhesive tape available or
976 known, nor any kind of pressure-sensitive adhesive tape having a non-fibrous film backing, nor having any kind of transparent backing. To the best of my knowledge and belief, the Minnesota Mining & Manufacturing Company pioneered the development of such adhesive tape."

Has your opinion in that regard changed, or your knowledge, in the intervening years? A. No.

Cross Examination

By Mr. Spille:

Q. Perhaps Mr. Haight asked you this, Mr. Lake, but are you now employed by duPont? A. I am.

Q. In what capacity, sir? A. As manager of converter sales.

Q. Are you appearing as a voluntary witness for Minnesota Mining or were you subpoenaed? A. Well, to a degree, you might say it was voluntary.

977 Q. To what degree, sir? A. Well, I understood that I would be subpoenaed and have to give a deposition in Wilmington, so for the convenience of all concerned, I came to New York.

Q. Who conveyed the information to you that you would be subpoenaed and have to give a deposition in Wilmington? A. By the attorneys of Minnesota.

• • • • • • • • • • •

Q. Now the plain transparent or normal cellophane is quite an old product, is it not? A. Why, I would judge it to be, yes.

Q. Would you say it goes back as early as 1912? A. I have no proof of that, but I understand it was made about that time, in France.

• • • • • • • • • • •

978 Q. And do you know who was responsible for the commercial development of normal or plain cellophane in France, say, prior to World War I? A. The French interests, and I believe it was Dr. Brandenberger.

Q. Dr. Jacques Edwin Brandenberger? A. I think that is his first name.

Q. When duPont sold or manufactured normal cellophane—I believe you testified it started in 1924, is that correct? A. That's right.

• • • • • • • • • • •

982 Q. Now at that time, and I am referring to 1924-25, did plain or normal transparent cellophane compete with other wrapping materials such as paper and glassine and cloth and the like? A: It did.

• • • • • • • • • • •

987 Q. I believe in your direct examination, Mr. Lake, you stated that gum arabic solutions were used to seal normal or plain cellophane, is that correct? A. That is correct.

• • • • • • • • • • •

990 Q. Now, Mr. Lake, I believe you testified on direct examination that in 1926 the duPont Company after doing some pilot plant work, or some production runs on moistureproof cellophane, inquired of adhesive manufacturers what adhesives could be used on that moistureprooof cellophane, is that correct? A. That is correct.

. . . . . .

991 Q. Who did the solicitation, do you know? A. You mean of asking the manufacturers?

Q. Yes. Who was the man? A. I don't know. It was done by the technical organization.

Q. Well, how do you know they did it at all? A. Well, we were sadly in need of a moistureproof or an adhesive for moistureproof cellophane and we were very anxious to try to find out if there was one available.

Testimony of **Ralph C. Schilly** of the duPont Company, called as a witness by Technical.

(Record pages 2274 et seq.)

Direct Examination

By Mr. Spille:

2274 Q. Mr. Schilly, what is your position? A. I am a development engineer for the Film Department.

Q. In what company? A. With the duPont Company.

Q. In Wilmington, sir? A. In Wilmington, Delaware.

2275 Q. How long have you been employed by duPont or any of its subsidiaries? A. For approximately thirty years.

Q. By which company were you first employed? A. By the duPont Cellophane Company of Buffalo, New York.

Q. In what capacity, sir? A. As a research chemist.

Q. Do you have a technical education? A. Yes.

Q. What is it, please? A. I beg your pardon?

Q. What is your technical education? A. I have a Bachelor of Science degree from the New York State College of Forestry of Syracuse University.

Q. When did you receive that degree, sir? A. In June 1924.

Q. Did you thereafter, soon thereafter, become employed by the duPont Cellophane Company? A. Yes, sir.

Q. What work were you assigned to in 1924 at the duPont Cellophane Company? A. My work consisted
2276 of certain research problems on the manufacture of regenerated cellulosic film in the plant. In addition, I was doing work on attempting to obtain improved adhesives for plain transparent cellophane.

Q. This is 1924? A. This is 1924.

Q. Were you the only man at duPont Cellophane Company engaged in that type of work? A. At that time I was the only one doing any work on adhesives, but there were other men who were employed for doing research work on cellophane.

Q. Did you ever met Dr. Jacques Edwin Brandenberger? A. I did when he was in Buffalo.

Q. Do you know what reputation or what capacity Dr. Brandenberger had at Buffalo? A. I believe that he was the original producer of cellophane in France. As a matter

of fact, he was the original inventor, I believe, and he was there at that time to be sure that the cellophane plant was running satisfactorily as far as their standards, the French standards, were concerned.

2277 Q. Now in 1924, 1925 and 1926 was duPont Cellophane Company commercially manufacturing plain transparent cellophane and selling it? A. Yes, they were.

Q. And was it being sold for packaging purposes primarily? A. Largely, yes.

* * * * * * * * * *

2278 Q. Now, could you state to the Court what the general criteria were for an adhesive that duPont was seeking or working on on plain cellophane? A. Well, when we started to produce cellophane, which was in May, prior to my coming with the company, the French turned over to us a series of formulations that they considered as adequate for sealing plain transparent cellophane to itself or to paper or to cardboard or to glass or to any other product. These formulations generally consisted of gelatin, some phase, with a softener or gum arabic with a softener, or calcium chloride and gelatin dissolved in water.

2279 Q. Pardon me, Mr. Schilly. Were all these adhesives dissolved in water? A. All of these were water-base adhesives.

Q. Yes. Did you do any work— A. In our examination of these adhesives it showed that while they gave you a good bond so far as instantaneous bond and good grab, et cetera, on aging the bond weakened the cellophane, or it caused an excessive wrinkling, or deformation of the film on the package, and, as a consequence, we decided it was necessary to produce something that was superior to

the adhesive known at that time as acceptable cellophane adhesive.

The Court: Mr. Schilly, were these adhesives pressure-sensitive or were they water-soluable?

The Witness: They were all water-soluble adhesives.

The Court: And you had to apply some water or some dampness?

The Witness: Well, actually they were adhesives such as where you were trying to glue one surface to another with a wet adhesive.

Q. For example, like mucilage? A. Like mucil-
2280 age, when you are trying to seal one piece of paper to another piece of paper.

• • • • • • • • • • •

Q. Are you referring to 1924? A. I am referring now to 1924. So that work was attempted on those. We contacted the various adhesive companies in the—known to be producing adhesives in the country.

The Court: Mr. Schilly, when was this when you say "we did it"? What was that?

The Witness: That was in 1924.

2281 The Court: Were you with the company at that time?

The Witness: I was with the company at that time.

The Court: And who did the attempting to contact?

The Witness: I did. They all sent adhesives in and we tested those adhesives and we still felt that they won't be completely satisfactory for our purpose.

• • • • • • • • • • •

2282 A. We eventually obtained adhesives we considered adequate for the purpose of sealing plain transparent cellophane to itself or to other materials. They weren't entirely, completely, as you would say, satisfactory but they were the best that could be done with, and we had to use them.

The Court: Were they pressure-sensitive?

The Witness: These water-soluble adhesives I wouldn't class as pressure-sensitive adhesives, no, sir.

* * * * * * * * * * *

2283 Q. Now, sir, did you do any work at all on solvent dissolved adhesives which could be classified as pressure-sensitive? A. Yes, I did.

Q. Approximately when did you start? A. That is going to be rather difficult to say, but it can run from the period of the fall of 1924 to the fall of 1927; I can't say exactly when.

* * * * * * * * * * *

2284 Q. Will you please describe to the Court what you did, if anything, with pressure-sensitive adhesives applied to cellophane. Plain cellophane I am referring to all the time. A. I am not sure. You are using the words "pressure-sensitive".

Q. All right, I will call them tacky or sticky. A. That is—thank you—because I know at that time I was not in any sense thinking about pressure-sensitive adhesives, but we were trying to produce a product that would show absolutely no embrittlement or degradation of the cellulose, regardless of how long the joint stood, whether it be six weeks or six years. We also wanted to produce an adhe-

sive that wouldn't show or cause the cellophane to wrinkle; and with that in mind we started some work employing gum copal.

• • • • • • • • • •

2290 Q. Now, sir, going to the period after December 1927 when you were attached to the sales group, did you ever accompany a salesman to a prospective new account to demonstrate the packaging uses of cellophane? A. Yes, I believe I did.

Q. Can you describe to the Court what was the typical demonstration made, as to how the package was sealed with cellophane? A. Well there again it depended on whether we were using plain transparent cellophane or moistureproof cellophane.

Q. Let us first describe the plain transparent cellophane.

2291 A. Plain transparent. Well, in that case we would normally, probably, employ a water-soluble adhesive because it, first of all, was a lot less expensive adhesive, and we were dealing with something that was never not as cheap as paper at that time.

• • • • • • • • • •

Q. Now would you or the salesmen make a demonstrastration of wrapping a package in plain transparent cellophane and then sealing the joints with the water-soluble adhesive? A. That is right.

Q. Now what was the practice, if there was a practice, with regard to moistureproof cellophane demonstration? A. I would say that the same practice probably followed, except instead of a water-soluble adhesive we employed whatever formulation at the time was available, and the

one that I distinctly recall was a similar combination of ingredients as I gave to you in the formula form of—

2292 Q. That is a gum solvent tape? A. A gum solvent tape, and that was our No. 154T.

Q. Yes. A. And that was applied with a brush. Everything was being done largely by hand in those days.

Q. Yes. Now did duPont, or did you ever develop any solvent adhesives where the solvent ingredient was essentially nitrocellulose? A. Yes, sir.

Q. Were such adhesives used on cellophane? A. Yes, sir, they were.

Q. Were they pressure-sensitive? A. I would say essentially no, they were not pressure-sensitive adhesives.

• • • • • • • • • • •

2293 Q. Will you tell the Court approximately when heat-sealing cellophane or MST cellophane was offered for sale? A. I would say in about 1932.

Q. Now, prior to that time was there any type of moistureproof cellophane available on the market? A. Yes, sir, from—I believe that it came out commercially in 1927, the moistureproof cellophane, . . .

• • • • • • • • • • •

Cross Examination

By Mr. Haight:

2294 Q. I will ask you do you have any documents from duPont's file with you? A. I believe that we do have, yes.

2295 Q. And that were brought here at the request of counsel for the plaintiff? A. I assume that they

probably were. I just don't know, but I know that we have some documents with us.

• • • • • • • • • • •

2299 Q. Mr. Schilly, you mentioned the use of adhesives in demonstrating the sealing of packages with moistureproof cellophane. Did you ever accompany salesmen when the salesemen were demonstrating the wrapping of food products? A. I believe I did perhaps, yes.

Q. Do you have any recollection of how any food products were to be wrapped, or the demonstration of it? A. Well, normally, if we were going to wrap the product for a customer, why, we would have a bottle of adhesive normally with us, or if we were going to merely use a confectioner's fold, we would employ a confectioner's fold and some means of holding the ends together of the package.

The Court: And what would those means generally be?

The Witness: Those means could have been several over a period of the first three years, 1927 through '31, we will say, or four years.

The Court: Yes.

The Witness: They could have been either an ad-
2300 hesive, a rubber band or even a paper band wherein the ends were folded underneath the package and you just took an ordinary standard paper band and pressed it, of course, to make it, make the package reasonably attractive and seal it underneath.

Q. Now did you never find any objection to the smell of the adhesive in connection with the food products? A. Yes, we did.

Q. Do you recall any specific instance where the pos-

sible objection required the use of a rubber band when the rubber band was really not appropriate? A. Well, yes, I do. There are probably innumerable examples, but I can only recall one, and this was my contact with the Beardsley Company, at that time located—I am not sure of the town in New Jersey.

They were producers of dry herring and they were interested in using moistureproof cellophane for the purpose of the retention of the odor inside the package and not outside the package, and the retention of the moisture within the product so that it would not become dry and hard to keep.

2301 We took packages out there and had Mr. Beardsley, Sr. examine them. We had made up one package with the adhesive, and I believe it was the 154 adhesive, or it was the copal acetone solvent, and Mr. Jorgenson, the salesman in the territory, made up a package in which he wrapped—in which he normally produced a confectioner's fold, folded the ends under, and placed those ends in place with a rubber band.

Mr. Beardsley was not satisfied with the package, and neither was he satisfied with the adhesive because even above the smell of the fish you could detect the copal odor.

Q. And there were other instances similar to that, were there, at that time? A. I said that there were, but that is the only one I can recall so vividly to my mind.

Q. I show you a document which was marked for identification as Defendant's Exhibit VVVV and ask you if you can identify that. Do you have the original available? Perhaps the witness would care to look at that. A. Yes, I believe I can identify this. I was not sure of it before.

Q. And it is a report dated December 15, 1930?

2302 A. Yes, sir.

• • • • • • • • • • •

Mr. Haight: I will offer the report identified by the witness as Defendant's Exhibit VVVV.

• • • • • • • • • • •

2308 The Court: Do you have any independent recollection, Mr. Schilly, of the analysis which you made
2309 under date of December 15, 1930, entitled "An Analysis of the Use of Moisture-Proof Cellophane Adhesives According to Industries"?

The Witness: That is a pretty tough thing to say, Judge. I cannot say yes, that I do have a recollection. I can't do that, Judge, because you are asking me specifically to point out the respective industries, and while I can point them out in a broad sense, I could not do that specifically as they are brought out in this report. I cannot do that.

The Court: Well, did you prepare a report under date of December 15, 1930, in which you set forth your analysis of the use of moistureproof cellophane adhesives according to industries?

The Witness: Yes, I did.

The Court: And is that the report which is now marked Defendant's Exhibit VVVV for identification? Is that the report which you so prepared?

The Witness: Yes, sir, this is the report I prepared.

The Court: And prepared at that time?

The Witness: Yes, sir.

The Court: And looking at that report, does that refresh your recollection?

2310 The Witness: If I read it. I am going to have to be honest with you, your Honor, as I have not read this report—

The Court: But at the time you made it.

The Witness: —except reading conclusions, the summary and the conclusions.

The Court: But at the time you made it you read it?

The Witness: Yes, I read it then, but I have not examined the details in this report.

The Court: All right. VVVV for identification may be received in evidence.

• • • • • • • • • • •

2315 The Witness: Now, your Honor, you are implying that I was doing some work for the production of a pressure-sensitive tape, are you not? I was not working working on that. I was working in the production of an adhesive to seal a wrapper.

• • • • • • • • • • •

2316 The Court: But you weren't working at all on any pressure-sensitive?

The Witness: No, sir.

The Court: It didn't occur to you at that time?

The Witness: No, sir it didn't. Somebody asked me why didn't it, and I said I was too dumb.

• • • • • • • • • • •

2317 Q. Do you recall a time when the "Scotch" Brand Cellophane Tape became commercially available? A. I can't recall, except by hearsay.

Q. Do you have a general recollection of the effect that had on your own personal business activity? A. Well, at that time we realized that the material itself would greatly improve the sales of moistureproof cellophane. That I believed.

• • • • • • • • • • •

2318 The Court: Mr. Schilly, would you please look on page 2 of your report, the second paragraph, which reads:

> "Along this same line what is considered one of the important problems is finding a method of instantly sealing filled bags, envelopes and tubes either with labels, bands or adhesives in which additional treatment such as pressure or heat is not necessary. It is believed that something has been found that may eventually answer this problem . . ."

• • • • • • • • • • •

2319 The Court: It does convey to my mind that at that time you believed that something has been found.

The Witness: That is true, I have got to abide by that; but I don't remember, I just don't remember what was in mind. About that time, I do know that—let's see, this was in December 1930; it is possible that Albert Allen—

• • • • • • • • • • •

2320 The Court: Who is Mr. Allen?

• • • • • • • • • • •

2321 The Witness: Mr. Allen is a special representative in the sales development group and currently, today, he is one of the best consultants on fresh produce packaging in the country.

• • • • • • • • • • •

2322 Q. I show you a letter which has been marked for identification as Defendant's Exhibit WWWW which is a copy of a letter dated December 1st, 1930 to duPont Cellophane Company, Inc., Mr. A. S. Allen, Manager Industrial Section, No. 2 Park Avenue, New York City, from Minnesota Mining, J. A. Borden, Sales Manager. I 2323 will ask you to read that letter and see if that refreshes your recollection in this matter. A. No, I cannot remember. Obviously I must have been informed or I had seen something of that sort, otherwise I would not have made that statement in the report. But I cannot remember.

Q. Now another letter dated January 21, 1931, which will be marked as Defendant's Exhibit XXXX for identification, to Minnesota Mining by Mr. Heyden, shows in a little red notation in the upper righthand corner, "cc Mr. R'S". I will ask you if that refreshes your recollection. A. Well, a copy may have been sent to me, but—

Excerpts from Defendant's Exhibit VVVV, a report dated December 15, 1930, entitled "*An Analysis of the Use of Moistureproof Cellophane Adhesives According to Industries*" prepared by R. C. Schilly, of the duPont Company, a witness called by plaintiff.

• • • • • • • • • • •

There are several objections to the use of heat in conjunction with application of adhesives by hand or machine worthy of notation:

A. On hand wrapping it is an extra operation slowing down considerably the speed of wrapping and increasing the cost.

B. On converting machines for handling M. T. Cellopane, installation of hot plates is costly and possibly cannot be accomplished owing to the machine setup. In the latter case a concern that is not able to purchase new machines may not be able to use M. T. Cellophane.

C. Heat has a slightly objectionable effect on M. T. Cellophane in that it causes wrinkling, slight odor and reduces somewhat the moisture-proof qualities of the sheet.

D. A much higher temperature of the heating elements is required for sealing M. T. Cellophane than waxed paper. A maximum temperature of 80° Centigrade will satisfactorily seal any waxed paper.

• • • • • • • • • • •

Introduction

The purpose of this report is to present a brief but clear picture of the uses of M. T. Cellophane adhesives by the trade, the objections encountered and what is necessary to secure absolute satisfaction in the way of a sealing agent.

The following outline will be used in tabulating the data secured according to industry and product.

1—What wrapping materials were previously used.
   a—Adhesive employed.
   b—Method of sealing.

2—What adhesives are employed for sealing M. T. Cellophane.

3—Method of Sealing.

4—What was necessary to transfer the wrapping of the product into M.T. Cellophane.

5—Objections to use of recommended adhesives keeping in mind the following:

a—Odor.

b—Quickness in taking hold.

c—Strength of Seal.

d—Variable viscosity.

e—Comparable ease of handling to water soluble glues.

6—What is necessary to perfect absolute satisfaction in use of M.T. Cellophane adhesives.

Summary

While there unquestionably has been considerable progress in improving our adhesives for Moistureproof Cellophane there is work still to be done before the sealing problem can be considered as solved. Whether the ideal adhesive can ever be produced is still an open question but the fact remains, as you read through the proceeding pages, there are certain problems that must be solved before our troubles will be over.

In the majority of cases whether hand or machine wrapping "speed of handling and sealing", will make or break the adoption of M.T. Cellophane. It is generally conceded that in hand wrapping M.T. Cellophane is harder to handle than either paper or P.T. Cellophane. With this handicap to begin with it is all the more important that a quick setting adhesive, easy to handle be secured. It is true we have made progress in this direction with the formulation of # 559 adhesive, but it is felt that even this can be improved.

Along this same line what is considered one of the important problems is finding a method of instantly sealing filled

bags, envelopes and tubes either with labels, bands or adhesives in which additional treatment such as pressure or heat is not necessary. It is believed that something has been found that may eventually answer this problem—the use of the same gumming on Scotch Masking Tape, on Cellophane, tape, or labels.

For quick setting hot melts are out of the question from a hand wrapping standpoint although they are the best agglutinants we have in this respect.

Another important problem is securing an odorless adhesive. It is because of this trouble with our present glues that they are not being used on cakes. Most M.T. Cellophane is used in connection with food products which readily absorb foreign odors. Adhesives are not used on machine wrapped cigars because of odor. The question of "odor" is very important and must take first place along side of "quick setting".

The salesmen today are working under a handicap because of this negative attitude toward the use of recommended M.T. Cellophane adhesives as a result of their own experience in handling together with trouble they have encountered with organizations that have been using them. Many of them claim that regardless of the product they always attempt to recommend a wrap not requiring any M.T. Cellophane adhesive for sealing. Invariably their reason is "Adhesives have too much odor, do not stick fast enough and are too hard to handle".

Generally speaking the joint strength produced with our present adhesives is satisfactory, very few, if any, complaints ever being received on this score.

Conclusions

As a result of this survey on the use and objections to our present recommended adhesives, the following facts have been tabulated:

1—An adhesive that will take hold more quickly, have less odor and be easy to handle either for machine or hand wrapping is desirable.

2—Quick sealing of filled M.T. Cellophane bags, envelopes, tubes, is important and it is possible we may have something in the Masking tape.

3—Methyl Cellosolve is being used as a sealing agent satisfactorily and it appears as though its use will spread.

4—Hot Melts are of no value in hand sealing but possibly could be used in machine sealing. This field seems to be in the fabricating line but as yet no production runs in laminating M.T. Cellophane to cardboard have been made.

R. C. Schilly.

Note:

The data for this report has been taken from Trade Reports, Correspondence File, and personal contact with concerns using adhesives.

The cooperation given by the Trade Record Section in "Digging" out this information is greatly appreciated.

. . . . . .

Industry and Products

VIII Baking

. . . . . .

5

Because of the objections to using adhesives from a handling and odor standpoint, the most satisfactory doughnut wrap is single stack, confectioners fold on the side the ends twisted slightly and forced into the holes of the end doughnuts. A band is then placed around the unit. This does not make a satisfactory looking package.

6

An adhesive as free from odor as possible and one that would handle easy, would solve many problems in the doughnut and cracker industries.

Defendant's Exhibit WWWW, letter dated December 1, 1930 from Minnesota Mining to DuPont:

MINNESOTA MINING & MANUFACTURING COMPANY
ST. PAUL, MINN.

December 1st, 1930

DuPont Cellophane Company. Inc.
Mr. A. S. Allen, Mgr. Industrial Section,
No. 2 Park Avenue,
New York City.

Dear Mr. Allen:

As requested in your letter of November 28th, we are arranging to send two sample rolls of Cellophane Tape to Dr. W. L. Hyden at Research Division, DuPont Cellophane Company, Buffalo, New York.

We are glad to have Dr. Hyden make the examination he has

in mind and would like later on to have you advise us the results of his experiment.

We are also including no charge one small dispenser so that Dr. Hyden will get a better picture of the speed in removing strips from the roll.

Yours very truly,

MINNESOTA MINING & MFG. COMPANY

J. A. Borden,

JAB:ED Sales Mgr.—Tape Products

Dictaphone

Defendant's Exhibit XXXX, letter dated January 21, 1931 from Du Pont to Minnesota Mining:

cc: Mr. R. C. Schilly

January 21, 1931

Minnesota Mining & Manufacturing Company
St. Paul, Minnesota

Attention: Mr. J. A. Borden
Sales Manager—Tape Products

Gentlemen:

We have received your letter of January 9 and the three sample rolls of Celloseal tape. We find that this latter material is an improvement over the previous tapes which you have sent us and although there is some residual odor we believe that with minor improvements this tape can be used with satisfaction in sealing Cellophane packages.

We are glad to know that you are working on a printed tape and feel that such a development will be a very valu-

able assistance in sealing various packages wrapped in Cellophane and other materials and that such a tape will find a variety of uses.

We appreciate your kindness in supplying us with the samples and shall be glad to see any additional material you may manufacture.

Very truly yours,

CHEMICAL DIVISION
William L. Hyden

WLH

Testimony of **Jacob P. Glaser,** merchandise manager of Goldsmith Bros., New York City, called by Minnesota.

(Record pages 940 et seq.)

Direct Examination

By Mr. Kinney:

940 Q. Where do you reside, Mr. Glaser? A. 150 East 31st Street, Brooklyn, New York.

Q. And what is your business? A. I am employed by Goldsmith Bros. at 77 Nassau Street, New York City, as merchandise manager and buyer.

Q. When did you start to work for Goldsmith Bros.? A. 1912.

Q. And what generally is the business of Goldsmith Bros? A. We—well, I would say that it is a specialty store with emphasis on commercial stationery and equipment, office equipment.

. . . . . .

941 Q. What is the general class of customers served by Goldsmith Bros? A. Well, we sell offices, factories, homes, and we sell practically to everybody.

Q. About how many employees roughly does Goldsmith Bros. have at the present time? A. Approximately 600.

942 Q. And about how many employees did Goldsmith Bros. have when you started with them in 1912? A. About 25.

Q. Can you give us some idea of the size or scope of the business of Goldsmith Bros? A. We are known in our stationery and office equipment division as "America's Largest Stationers". We have other departments, specialty departments on our first and second floors, such as ladies' wear, luggage, drugs, and department store items.

Q. Yes. Now what was your position with Goldsmith Bros. when you started with them in 1912? A. I was a sales clerk.

Q. And maybe you have answered this but I will ask you again what is your present position with Goldsmith Bros? A. Merchandise buyer; merchandise manager and buyer.

. . . . . .

Q. Now, in a very general way what has been the nature of your positions with Goldsmith Bros. in the intervening years between 1912 and the present time? A. Well, I rose from clerk to assistant buyer, then as full buyer. At the present time I am what they call a senior buyer,
943 being the oldest employee that they have, and also I supervise other departments in the commercial stationery division.

. . . . . .

Q. Does Goldsmith Bros. buy pressure-sensitive adhesive tapes and resell them at the present time? A. Yes, sir.

Q. Among those products does it buy and resell film-backed self-adhering tape, such as "Scotch" cellophane tape? A. Yes, sir.

Q. Does it handle any other brands of transparent film-backed tape? A. We do.

944 Q. For how long a time has Goldsmith Bros. handled transparent "Scotch" cellophane tape? A. I would say approximately around 20 years.

Q. Now, do you know in general what your customers used that tape for when Goldsmith Bros. started handling it? A. They used it for mending purposes and packaging.

Q. Now, was there anything about that transparent "Scotch" cellulose tape when Goldsmith Bros. started handling it and when you first became familiar with it that particularly impressed you? A. Well, what impressed me was the transparency and the adhesive and the ease when it was being applied to packages, and to mending of manuscripts, books, and used on window displays, and things of that kind.

Q. Had you ever known of a transparent self-adhering tape prior to the time that you became familiar with transparent "Scotch" cellulose tape? A. I did not.

Q. Had you ever know of a self-adhering film-backed tape of any type prior to the time you became familiar with "Scotch" cellulose tape? A. No, sir.

The Court: Was it your job 20 years ago with Goldsmith Bros. to purchase tape for packaging material? The

Witness: Possibly it was. I can't definitely say
945 because we were very small in those days and I did a lot of everything.

The Court: Well, if 20 years ago was the first time you say when you started to handle transparent cellulose self-adhering tape, if at that time there were other tapes on the market that served substantially the same purposes, would you have known it? The Witness: Oh, I would have known it, yes, sir.

946 The Court: Was it your business at that time to keep abreast of developments coming on the market and to know the different products that were coming on the market? The Witness: Yes, sir.

The Court: And you did not know of any such tape? The Witness: No, sir.

The Court: All right.

• • • • • • • • • •

Cross Examination

By Mr. Spille:

• • • • • • • • • •

947 Q. I believe you testified that as of now Goldsmith Brothers sells approximately $100,000 per year of "Scotch" Brand cellophane tape at retail. What do you mean by that? A. Well, at retail, that is at the retail selling price when the consumer buys and what the consumer pays for it.

• • • • • • • • • •

961 Q. Now going back to when Goldsmith first purchased "Scotch" Brand cellophane tape in 1934—

The Court: The witness did not say, Mr. Spille—

Mr. Spille: I am sorry.

The Court: I did not hear this witness say that they first bought it in 1934.

Mr. Spille: I understand him to say, your Honor—

The Court: He said approximately twenty years ago.

Mr. Spille: Approximately twenty years ago. I did not mean to mislead the witness.

Q. Approximately twenty years ago. I will adopt your — A. Approximately twenty years ago; it might have been eighteen.

The Court: It might have been twenty-two? The Witness: It might have been twenty-two.

Testimony of **Neil S. Beckwith**, President of Carter Paper Company, Springfield, Mass., called by Minnesota.

(Record pages 700 et seq.)

Direct Examination

By Mr. Kinney:

700 Q. Where do you reside, Mr. Beckwith? A. In Long Meadow, Massachusetts.

• • • • • • • • • •

701 Q. What is your business? A. Wholesale paper merchant.

Q. What company? A. Carter Paper Company, of Springfield.

• • • • • • • • • •

Q. What position do you occupy with that company? A. I am president and treasurer.

Q. When did you first start working for Carter Paper Company? A. 1925.

Q. Was that on a full time basis? A. No, it was while I was attending high school.

Q. When did you start working for the Carter Paper Company full time? A. The spring of 1927.

Q. Now what is the general nature of their business?

• • • • • • • • • • •

702 A. We wholesale paper, twine, and kindred items.

Q. Now in the business of Carter Paper Company, has it at any time handled pressure-sensitive tapes? A. Yes.

Q. And among those products has it ever handled a transparent pressure-sensitive film-backed tape? A. Yes.

Q. When did it first start doing that? A. Late 1931.

Q. Has it merchandised or distributed that kind of a tape since that time? A. Yes, continuously since that time.

Q. What brand of tape was that that was merchandised beginning in late 1931? A. "Scotch" Brand.

• • • • • • • • • • •

707 A. We started handling the "Scotch" Cellophane Tape product in late 1931.

Q. And has your company handled it from that time down to the present time? A. Yes.

• • • • • • • • • • •

708 Q. Your company was also handling that product "Scotch" cellophane tape in 1932, was it? A. Yes.

Q. Now, during this period of late '31 or some time during '32 were you familiar with what your customers used that product for? A. Yes.

Q. Talking about transparent "Scotch" Brand cellophane tape? A. Yes. Well, they used it for sealing small packages primarily.

Q. Now, what class of customers bought from you this tape at that time? A. Grocery stores and drugstores, bakeries, and primarily for packaging, sealing food packages.

* * * * * * * * * *

709 Q. Prior to your familiarity with transparent "Scotch" cellulose tape, did you sell to your customers, that is, customers of Carter Paper Company, any kind of products for sealing packages? A. Yes, we sold water-activated gum tape; we sold twine, but that was not for sealing packages.

* * * * * * * * * *

710 Q. Now, Mr. Beckwith, I show you a roll of what appears to me to be some kind of an adhesive tape that has been marked as Defendant's Exhibit VVV for identification. Has your company ever handled or merchandised that kind of a product? A. Yes, sir.

Q. What kind of a product is that? A. Well, it is 1-inch 35-pound 500-foot gum sealing tape made of kraft paper, animal adhesive, animal glue or bone glue probably.

Q. How is this tape used or what did you do with it to make it useful in sealing packages? A. Well, it is dis-

pensed through a dispenser, and you activate it with water and it is spread on with a brush. Is that what you want?

Q. Yes. Now is or is not this the general kind of water-activated gum tape which you talked about and which you said had been in use back before your company started handling transparent cellophane tape? A. That is the tape formerly used, yes, and still used.

• • • • • • • • • •

711 Q. Prior to the time your company started handling transparent "Scotch" cellulose tape, had you ever known of a film-backed pressure-sensitive tape of any kind in the market? A. No.

Q. Had you known of such a product otherwise? A. No.

Q. Had you ever known of a transparent self-adhering tape of any kind prior to the time your company began handling transparent "Scotch" cellulose tope? A. No.

Q. What was the approximate volume of your sales of transparent "Scotch" cellulose tape the first year that you handled it, the Carter Paper Company handled it? A. Well, I would say between three and four hundred dollars.

• • • • • • • • • •

Cross Examination

By Mr. Morris:

Q. And in 1931 what was your job with Carter?

713 A. I was doing the work as a sales manager but was not a sales manager; I didn't have the title, but I was doing the work.

Q. You were acting as sales manager? A. That is right.

Q. What did Carter sell at that time, what products? A. A general line of course wrapping papers, twines, and so forth, kindred items.

• • • • • • • • • • •

A. Rubber bands, and tapes, and writing papers, and a general line of retail items as well as wrapping items.

• • • • • • • • • • •

717 Q. Now you spoke in your direct examination of pressure-sensitive tape. What did you mean by the expression pressure-sensitive? A. As I understand it, it means to me that a tape which immediately adheres to an object without any moistening or without adding anything to the tape itself; it sticks immediately.

Q. Does it mean to you that if you have to put some kind of a solvent on it that it is pressure-sensitive? A. No.

Q. You just don't do anything to it? A. That is right.

• • • • • • • • • • •

724 Q. Now who did the buying before you started in October of 1931? A. The former sales manager.

Q. Did he buy any of this transparent "Scotch" cellulose tape? A. No.

Q. There was none around when you started your buying in October, 1931? A. There was none around.

• • • • • • • • • • •

725 A. Well, briefly, when I graduated from high school in the spring of January or February 1927, I then spent two years in the office of the Carter Paper Company and was familiar with everything we handled. Then when the salesman died in early 1929, I applied for his position on the road and got it. I was on the road for

the company for three years, and again was familiar with every item we handled.

Q. And if there had been a transparent cellulose pressure-sensitive adhesive tape sold in this country prior to 1931, you just didn't know about it; is that it? A. That's correct. I think we would have known about it.

Q. Why do you think that? A. We were the leading distributors in Springfield at the time and, therefore, I think it would have been offered to us.

• • • • • • • • • • •

726 Q. How did you come to buy this "Scotch" tape in 1931? Did the 3M salesman show it to you and urge you to buy it? A. No. A food broker, a grocery broker, came in and sold it to us on a guarantee basis.

• • • • • • • • • • •

734 The Court: When you sell this "Scotch" brand cellophane pressure-sensitive adhesive tape, did it replace any other packaging substance or material? The Witness: Oh, yes.

The Court: For the purposes for which you were selling it? The Witness: Yes, sir. It replaced twine and gummed kraft sealing tape and rubber bands. It definitely did and it speeded up the packaged product.

• • • • • • • • • • •

735 The Witness: Yes. It replaced twine and gummed kraft sealing tape and rubber bands. It speeded up the packaging problems in the retail stores.

Q. Well, is it quicker to put on a piece of that tape than it is a rubber band? A. Yes.

Q. And when you say it replaced, you mean that the

people who bought rubber bands stopped buying rubber bands and bought this tape? A. Today we do not even sell rubber bands in bulk. We used to buy hundreds of pounds of rubber bands in bulk for packaging.

• • • • • • • • • •

Redirect Examination

By Mr. Kinney:

736 Q. If I understand what you said on cross-examination, or as I understood your answer. you said that a tape such as this water-activated gum tape of Exhibit VVV would not be used to seal soft packages, or what that your expression? A. Yes, it was. In other words, it is easier to use a water-activated tape of that kind which needs some pressure on that kind of a rigid package, such as, well, such as a shoebox or a carton.

Q. What would be an illustration of a soft package, Mr. Beckwith? A. Well, drygoods, dressgoods.

Q. And what kind of a tape would be more acceptable for sealing soft goods? A. Pressure-sensitive tape.

Q. In particular what kind of a pressure-sensitive tape? A. Well, film-backed pressure-sensitive tape.

Q. And are those products, film-backed pressure-sensitive tape of the transparent variety used for sealing soft packages? A. Yes.

• • • • • • • • • •

738 A. Our sales volume last year, for instance, on transparent cellophane "Scotch" tape was over $30,000.

Q. And during the first year that you handled that product it was approximately what? A. Three to four hun-

dred. I think about that. This is still based on memory but I think the exact figure was $334, or between three and four hundred.

Q. Well, if my arithmetic serves me correctly that is about a hundred times the volume during the last year than you had the first year?

• • • • • • • • • •

Recross Examination

By Mr. Morris:

740 Q. Now, I could use a piece of this tape of VVV to successfully seal and package drygoods, couldn't I? A. You could if you took the time, you know, to press it down a little bit.

Q. And if I were going to use cellophane tape I would have to take the time to put that on, too, wouldn't I?

741 A. Not nearly as much time.

Testimony of **Gerald W. Kelleher,** Buyer for McKesson & Robbins, Inc., called by Minnesota.

(Record pages 1004 et seq.)

Direct Examination

By Mr. Harold J. Kinney:

1004 Q. What is your business? A. I am employed by McKesson & Robbins, Inc., wholesale druggists.

Q. What position do you occupy with that company? A. A buyer of drug sundries.

Q. How long have you been with McKesson & Robbins? A. A little over 24 years.

Q. Can you tell us when you started? A. May 26, 1930.

Q. And what was your position at that time, May 1930 and for the ensuing year or so? A. Well, I was always employed by McKesson & Robbins in the buying department, but I assumed the responsibilities of sundries buyer in 1944 but I have always been connected with the
1005 buying department.

• • • • • • • • • • •

A. There are a few areas we don't cover. Eastern Pennsylvania, Maryland, Delaware, the District of Columbia, parts of Idaho and Utah, parts of Utah, that we don't cover.

Q. Otherwise do you cover the entire area of the country? A. Pretty generally national distribution,
1006 yes, sir.

Q. Now what class of customers does McKesson & Robbins, Inc., through those seventy odd branches around the country, serve? A. Well, principally independent retail druggists.

Q. Do you have any idea of the number of independent retail druggists to whom McKesson & Robbins sell merchandise? A. Well, we estimate there are—we have 38,000 active accounts.

• • • • • • • • • • •

1007 Q. Now, Mr. Kelleher, does McKesson & Robbins, Inc., as of the present time, handle or distribute pressure-sensitive adhesive tape? A. Yes, sir, we do.

Q. And among those products do you distribute transparent pressure-sensitive film-backed tape? A. Yes, we do.

Q. And what brand or brands? A. Well, at present we are handling "Scotch" Cellophane Tape and the "Texcel" tape made by the Permacel Corporation.

Q. Now, can you tell us approximately when McKesson & Robbins first started handling, buying and reselling transparent "Scotch" Cellophane Tape? A. Oh, at least over twenty years ago.

• • • • • • • • • • •

1012 Q. Did McKesson & Robbins at any time put out catalogs covering the products handled by it? A. Yes, sir, we did.

Q. Do you know when the first catalog was put out? A. The first catalog was put out in August or September, 1931.

Q. Did you have anything to do with the preparation of that catalog? A. Yes, sir, I did, I helped to prepare it.

Q. I show you here a group of papers which have been marked—there are five sheets together—that have been marked collectively as Exhibit AAAA.

• • • • • • • • • • •

1013 Now, can you identify those pages? A. Yes, I can.

Q. What are they copies of? A. These are extracts from the 1931 catalog I spoke about, and this is the kind of cover sheet page and this outlines to our retail customers the products sold, the type, and so forth and so on.

• • • • • • • • • • •

1014 Q. Is there any transparent pressure-sensitive film-backed tape shown in those pages? A. No, sir, there is not.

Q. Was any shown in that 1931 catalog? A. None at all.

Mr. Kinney: I offer in evidence as Defendant's Exhibit AAAA the sheets just identified by the witness.

. . . . . .

Q. Is "Scotch" cellulose tape, transparent tape, indicated in this catalog of yours? A. Yes, it is on page 202.

. . . . . .

I would like to say it is also shown on page 233 of that 1935 catalog.

. . . . . .

Mr. Kinney: I offer in evidence as Exhibit BBBB the sheets from the 1935 McKesson catalog just identified by the witness. There is a cover sheet and five additional sheets.

. . . . . .

Q. Now when you first became acquainted with transparent "Scotch" cellulose tape, was there anything about that product which you particularly noted or which impressed you? A. Oh, I think so.

. . . . . .

It was very unique and, as I say, easy to work with and easy to apply.

Q. Had you ever known of a similar product before the time that you first became familiar with transparent "Scotch" cellulose tape? A. No, sir.

Q. Had you ever prior to that time known of any transparent self-adhering tape of any kind? A. No, none.

Q. Had you ever prior to that time known of any pressure-sensitive film-backed tape of any type? A. No, sir, none.

. . . . . .

Cross Examination

By Mr. Spille:

1020 Q. I believe you testified that prior to the first date of Exhibit ZZZ for identification, namely, May 3, 1934, or thereabouts, you had never seen or heard of a pressure-sensitive adhesive tape before? A. I didn't say I never saw or heard of it. I said we didn't handle it, we were not concerned with it. I am inclined to think
1021 that I saw some kind of cellophane tape used in stores for sealing packages maybe a year or two before that, maybe in 1932 or 1933.

. . . . . .

1037 The Court: Now, Mr. Kinney, would you please develop from this witness whether the portions of the catalog for the years 1931 and the year 1935 offered in evidence contain all that was in the full catalog dealing with this type of tape.

Redirect Examination

By Mr. Kinney:

Q. If you can answer that question, Mr. Kelleher, will you tell us whether in Exhibit AAAA, the 1931 catalog, which I understand these pages show no film-backed
1037a pressure-sensitive tape at all, as to whether there was any film-backed pressure-sensitive tape shown anywhere in the 1931 catalog of McKesson & Robbins. A. No, sir, there were none. There were none.

1038 Q. Now let us look at the next exhibit.

. . . . . .

1039 Mr. Kinney: Maybe I had better, your Honor, ask a general question about this BBBB, which does, I understand, show transparent "Scotch" cellulose tape in it.

The Court: All right.

Q. Did that catalog for 1935, if you are able to answer this question, contain any other pages showing any kind of film-backed self-sealing or pressure-sensitive tape? A. No.

Testimony of **Alfred E. MacAdam III**, President of A. E. MacAdam & Company, Inc., Brooklyn, New York, called by Minnesota:

(Record pages 1041 et seq.)

Direct Examination

By Mr. Kinney:

1041 Q. Where do you reside, Mr. MacAdam? A. At 234 Lakeview Avenue, East Brightwaters, New York.

Q. And what is your business? A. I am an executive in a paper wholesale firm.

Q. And what is the name of that wholesale firm? A. That is A. E. MacAdam & Company, Inc.

Q. And what executive position do you hold with that firm? A. President.

Q. How long have you been president of that firm? A. For ten years.

Q. How long have you been employed by that firm, or let me ask you this: When were you first employed by that firm? A. In 1927, the summer.

Q. And was that full time or part time employment? A. Summer only.

1042 Q. And when were you next employed by that company? A. The summer of 1928.

Q. And when next? A. The summer of 1929.

Q. And did that continue for several summers? A. That is correct, sir.

* * * * * * * * * * *

Q. When did you become a full time employee of that company? A. In July of 1933.

Q. Now, when did you finish high school, Mr. MacAdam? A. In the spring of 1927.

Q. The spring of 1927? A. Yes, sir.

Q. And then did you go to school some place else? A. I did, sir, to the Phillips Exeter Academy.

Q. And how long did you go there? A. Four years.

Q. And did you finish at that school? A. I did.

Q. Then did you go to school some place else? A. Yes, sir.

Q. Where? A. Massachusetts Institute of Technology for two years.

1043 Q. For two years? A. Yes, sir.

Q. And that schooling ended when at Massachusetts Institute of Technology? A. In June 1933.

Q. Now, in the summer of 1927 what was the nature of your work? A. I worked in the warehouse of A. E. MacAdam & Company, located at 12 Commercial Avenue in

Garden City, Long Island, New York. I worked as a porter.

Q. And what kind of things were handled in that warehouse? Was it the products of the company that the company was doing business in? A. That is correct. Paper plates, paper napkins, paper bags, wrapping paper, gum tape, twines.

Q. Now, what was your work when you started on the full time basis with the MacAdam Company in, I think you said, July of 1933? A. I went to work in the office at 95 Lexington Avenue, Brooklyn, as assistant to my uncle, who was then sales manager of the company.

Q. Can you give the Court some idea of the size or volume of business that A. E. MacAdam does at the
1044 present time? A. Two and three-quarter million dollars annually.

Q. Is that a wholesaling or distributing business? A. Entirely, sir.

Q. Can you give the Court any idea of the size of A. E. MacAdam Company's business in 1933? A. Yes, sir.

Q. When you started there on a full time basis. A. Under a million dollars.

Q. More than a half million dollars? A. Over a half and under a million.

Q. Now, what class of customers does your company serve generally? A. We serve retailers, institutions, public agencies, hospitals, banks, schools, manufacturing establishments, retailers as I say of all classifications.

Q. Would you name just a few of the items that your company distributes to that class of customers? A. Well,

we distribute paper cups, paper towels, paper napkins, paper plates, kraft wrapping paper, wrapping paper of many, many types, gum tapes, twines, and at the present time "Scotch" Cellophane Tape, masking tapes, a multitude of products, approximately 2000 items, sir.

1045 Q. And do you sell transparent "Scotch" Cellophane Tape at the present time?

Mr. Morris: Your Honor—

A. Yes.

• • • • • • • • •

1048 Q. And did you add transparent "Scotch" cellulose tape to the stock of items carried by your company, or was it already stocked as an item? A. It was already stocked as an item at the time I started in the summer of 1933.

Q. Now, did I ask you to look through some of your old papers to see if you could get some indication as to when your company commenced handling transparent
1049 "Scotch" cellulose tape? A. Yes, sir.

Q. Did you find any such paper? A. I did, sir.

Mr. Kinney: I would like to have marked for identification a little sheet here that says "Net Prices 'Scotch' Cellulose Tape" at the top of it as Exhibit CCCC.

(Marked Defendant's Exhibit CCCC for identification.)

Q. Now, I show you this sheet which has just been marked on the back Defendant's Exhibit CCCC for identification—A. Yes, sir.

Q. —and ask you if that is a copy of a page that came from the files of your company? A. Yes, sir.

Q. I see an autograph signature at the bottom of that

old price sheet. Whose autograph signature is that? A. That is mine, sir.

Q. When was that placed on that sheet? A. About a month ago in my office.

Q. Can you identify this original sheet from that
1050 autograph signature? A. Yes, sir.

Q. Now, is there any date or code on this sheet that helps you to fix the vintage of it? A. This down at the bottom in the lefthand corner, there is the identification by a printer which indicates—I will take my specs off—20,000 of these sheets were run in April, 1932.

Mr. Kinney: Now I offer in evidence Defendant's Exhibit CCCC, the document just identified by the witness.

* * * * * * * * *

Q. What did the customers of your company use transparent "Scotch" Cellophane Tape for when you first started with that company on a full time basis in the summer of 1933? A. For sealing or fixing window signs or holding labels on packages, or for a multitude of purposes.

Q. And when you refer to sealing what in particular did you have in mind there? A. Sealing of packages and cartons.

Q. What kind of customers used this product for
1051 these various uses that you have talked about and could you generally characterize the class of customers in 1933? A. In 1933 you mean?

Q. Yes. A. Retailers.

Q. What kind of retailers? A. Bakers, grocers, drug-stores, hardware stores, butchers, gift shops.

Q. Now, had you been familiar with any product your company was selling during the several summers prior to 1933 when you worked with the company? A. Yes, sir.

Q. Do you know what kind of products your company was distributing in 1927, or some of them, for fastening packages? A. We were distributing water-moistened and gum paper tape and heavy strength twines both cotton and fiber.

* * * * * * * * * *

Q. Now, do you know when you first became familiar with transparent "Scotch" cellulose tape? A. Yes, sir, in the summer of 1933.

1052 Q. And had you in your earlier years with the MacAdam Company known of any other kind of transparent self-adhering tape that was stocked and sold by your company? A. No, sir.

Q. Had you ever known prior to the time that you became familiar with transparent "Scotch" cellulose tape any pressure-sensitive film-backed tapes of any type which your company stocked and sold, or otherwise? A. Our company did not stock or sell any such tape.

* * * * * * * * * *

Q. Now, within your whole experience inside and outside of the company, had you ever known of a film-backed self-adhering tape prior to the time you became familiar
1053 with transparent "Scotch" cellulose tape? A. No, sir.

* * * * * * * * * *

Redirect Examination

By Mr. Kinney:

1059 Q. Has your company ever dealt in or sold cellophane sheets or foils to its customers? I am not

talking about tape now, just plain cellophane film. A. Yes, sir.

Q. Do you know how early your company sold that, that is, to your knowledge, how far back did that go? A. Cellophane sheets were a stock item when I first went to
1060 work in the warehouse in 1927.

Q. Did you continue to sell cellophane sheets or rolls of cellophane to customers in subsequent years, to your knowledge? A. Yes, sir.

Testimony of **Alfred W. Logan**, Division Manager of Providence Paper Company, Providence, Rhode Island, called by Minnesota:

(Record pages 1138 et seq.)

Direct Examination

By Mr. Kinney:

1138 Q. Where do you reside, Mr. Logan? A. Cranston, Rhode Island.

Q. Is that near Providence? A. Right outside of Providence.

Q. What is your business? A. The company's business is wholesale paper merchants.

Q. What company are you employed by? A. The Providence Paper Company of Providence.

Q. How long have you been employed by that company? A. Oh, about thirty years.

Q. Can you fix the time a little more accurately when

you were first employed by the Providence Paper Company? A. I came with the company in December of 1922.

Q. And where is the place of business of the Providence Paper Company? A. It is in Providence at 160 Dorrance Street.

Q. What is generally the business of the Providence Paper Company? A. Well—

1139 Q. —at the present time? A. We term ourselves in the trade as wholesale paper merchants and we are exceptional in that we have two other divisions that are really major; there is divisions in fine paper and in office equipment beyond coarse paper.

Q. Now, what is your position with the Providence Paper Company? A. Division Manager of the Coarse Paper Division.

Q. Of what you call the Coarse Paper Division? A. Yes, sir.

Q. Now, Mr. Logan, can you tell us some of the products that are handled and merchandized in that division? A. About everything that comes under the heading of paper, and we handle cordage, twines, gum tape, cellophane tape, and well, I could go on and on; towels, toilet paper and wrapper paper tissues, bags.

• • • • • • • • •

1140 Q. What brand or brands of cellophane tape does the Providence Paper Company sell at the present time? A. "Scotch" Brand.

• • • • • • • • •

Q. Do you handle entirely the transparent variety, or do you handle some colored "Scotch" cellophane tape? A. We have colored tapes also.

Q. Which do you sell the most of, the transparent or the colored? A. The transparent.

Q. Now, when the Providence Paper Company first started handling or dealing in transparent "Scotch" cellophane tape, when was that, if you know? A. Well, I don't really know. I couldn't place the date exactly, but roughly I would say, oh, possibly over twenty years ago.

Q. Now, I think I asked you if you could bring with you from Providence some record that might make some
1141 reference to the date when Providence Paper Company started handling this product? A. Yes.

Q. Did I so request? A. Yes, you did.

Q. I show you a card and ask you if you can identify that as one of the cards you brought with you. A. Definitely, yes, sir.

Q. That has a red mark on one side of it. Who put that mark on there? A. I did.

Q. When did you put that on there? A. Oh, possibly two weeks ago.

Q. Is that adjacent to an item there, and will you tell us whether that item does or does not refer to transparent pressure-sensitive tape. A. Yes, this refers to a sale made at that time of transparent cellophane tape or cellulose tape.

Q. And what is the date? A. September 6, 1933.

Q. And who is the customer? A. Henry Lederer Brothers, a very well known jewelry manufacturer in the State of Rhode Island.

* * * * * * * * *

1142 Q. Do you know whether that was the very first sale that Providence Paper Company ever made of transparent "Scotch" Cellophane Tape? A. No, no. I wouldn't be able to say that. However, this is one of the early records.

Q. What was your position as of the time we are referring to in that card there, September 1933, or around that period what was your position? A. Well, actually manager of the Twine & Cordage Department, under which this particular commodity came at that time, manager of the department, but it has since expanded, you see.

Q. Can you tell us within some period of time approximately when you first became acquainted with the existence of transparent "Scotch" cellophane tape in
1143 reference to the date on that card that you have just referred to? A. It might have been a year or two prior to the date here. I couldn't be sure of the actual date. I couldn't be sure about that, but 1933 or '32. Well, I guess as quickly as it came out, I guess that is when we heard about it, but I don't know just exactly what date it was. This record shows 1933.

Q. When "Scotch" transparent cellulose tape first came to your attention had you ever known of a transparent self-adhering tape of any kind prior to that date? A. No, I did not.

Q. Had you ever known of a pressure-sensitive film-backed tape of any kind on the market before "Scotch" cellulose tape came to your attention? A. No, sir.

* * * * * * * * *

Testimony of **Charles O. Moosbrugger,** called as a witness by Minnesota:

(Record pages 1205 et seq.)

Direct Examination

By Mr. Haight:

1205 Q. Will you state your name, please. A. Charles Moosbrugger.

Q. Where do you live, Mr. Moosbrugger? A. 1491 Edgecumbe Road in St. Paul, Minnesota.

Q. What is your occupation? A. Advertising director of Minnesota Mining & Manufacturing Company.

Q. How long have you been with 3M? A. Since January 15, 1936.

Q. What job did you have then? A. I was employed as an assistant to Mr. Camp, the advertising manager at that time.

Q. Can you state, briefly, what your work has been from then up until the present time? A. When I first started with the 3M Company I worked on hardware advertising, which included decorator's tape, masking tape, sandpaper of various types. Later on that year I was also extended to cover cellophane tape, and I continued to handle that product throughout the years up to the present time, along with my other duties.

* * * * * * * * * *

1208 Q. Now did you recently purchase or have purchased on the market some products in which "Scotch" Cellophane Tape is used in packaging? A. Yes. Under my supervision we secured a great many samples of commer-

cial uses for tape to show your Honor something of what happens at the retail level.

1209 Mr. Haight: I will suggest again that we not mark each one of these exhibits.

The Court: You just satisfy Mr. Morris about not marking these. It is all right with me.

Mr. Morris: They can mark them or not, as they choose. When I get around to it, if I want them, I will mark them. But I will concede that there is a lot of use for this cellophane tape. There is no use putting all that truck in.

Q. Just quickly tell us what that shows. A. This box is sealed with tape in two places, your Honor. That is the way you buy it in the retail store.

Q. What does this one show? A. Here is a combination deal, where the spatula is attached to a box of hot roll mix.

Q. By cellophane? A. With cellophane tape, "Scotch" cellophane tape. Here is a bag of Ivory Soap held here with transparent "Scotch" cellophane tape. Here is another combination, with a little spoon for a drip platter, I guess they call it. Here is a bag of peas, typical of many that you buy in the retail store, which are sealed with "Scotch" Cellophane tape on the top. It is a very common use for tape.

1210 Q. What is the next one? A. This is a belt which is held in the box with transparent cellophane tape, in three places.

• • • • • • • • • •

1212 The Court: Well, that is all very interesting, but I would like to hear something about what a combin-

1213 ation deal is, or what that particular combination deal is. Do you have a witness to describe that one, or can this witness?

Mr. Haight: I will ask the witness if he can describe that one, sir.

The Court: Very well.

The Witness: Well, this is two bottles of lotion, and it is a one-cent sale promotion put on by the Palm Beach Lotion Company. It is a rather heavy bottle, and it is put togetner with cellophane tape.

Q. Here is one large spaghetti package where they have used it. A. Five pounds of spaghetti, again evidencing the strength of the product; the cellophane tape is holding such a package with all the rigors and buffetings of distribution.

• • • • • • • • • •

The Court: Now, Mr. Moosbrugger, I am going to ask you, anticipating Mr. Morris's questions, and in each one of these instances of cellophane tape that has been 1214 referred to here, couldn't you have just as well used a piece of surgical tape?

The Witness: Oh, heavens, no.

The Court: Why not, if it is for adhesive purposes, it would have held, wouldn't it?

The Witness: But that package is supposed to have been sold at retail, over the counter to the housewives, and a package that does not have eye appeal is done. It is a tremendous appeal in the retail trade.

• • • • • • • • • •

Testimony of **Frank N. Manley**, called by Minnesota.

(Record pages 530 et seq.)

Direct Examination

By Mr. Kinney:

530 Q. Where do you reside, Mr. Manley? A. I reside at Hillcrest River Road, New Brunswick, New Jersey.

Q. And what is your business? A. I am the director of construction for Johnson & Johnson.

* * * * * * * * * *

Q. How long have you been with Johnson & Johnson? A. Since 1916, 38 years.

Q. And in that answer do you include your connection with subsidiary or affiliated companies? A. Yes.

Q. With what company were you associated in the early '30s? A. I was with the Revolite Corporation.

531 Q. And how is that corporation related to Johnson & Johnson? A. It was a wholly owned subsidiary of Johnson & Johnson acting as the Industrial Tape Division of that company.

* * * * * * * * * *

Q. And what was your position with Revolite Corporation? A. I was at first vice president and then I became president of the corporation.

Q. Over what period of time were you president of that corporation, approximately? A. From about 1932 to 1936.

Q. And what product did the Revolite Corporation make

and sell at that time generally? A. Quite generally pressure-sensitive adhesive plus resin-backed fabric.

Q. Did the Revolite Corporation at any time make a pressure-sensitive masking tape? A. Yes.

Q. And did it make that product during that period while you were president of the Revolite Corporation? A. Yes.

531a Q. Do you know when the company approximately commenced making a paper back pressure masking tape roughly? A. Oh, I should say somewhere between '33 and '35.

532 Q. Was your company, that is, either the Revolite Company or Johnson & Johnson interested in making or developing pressure-sensitive film backed tape? A. Yes.

Q. When did that interest commence? A. Somewhere around 1933.

Q. Had you been familiar with any film backed pressure sensitive tape on the market at that time? A. Yes, we knew there was a tape, and we had observed it.

Q. Who was the manufacturer of that tape? A. Minnesota Mining & Manufacturing Company.

• • • • • • • • • • •

533 Q. Mr. Manley, you have before you, do you not, a set of photostatic copies of documents beginning with the designation SS, the next one is TT and so forth, quite a number of them there, do you? A. Yes, I do.

534 Q. What are they generally? A. These are photostats of copies of our file which have been selected.

Q. And they are copies of papers taken from the file of the Johnson & Johnson Company, is that correct? A. That's right.

Q. Are they records that were made and preserved in the regular course of business by the Johnson & Johnson Company, or its affiliates? A. Yes.

• • • • • • • • • •

559 Q. During the time when you were president of Revolite Corporation, did that company or Johnson & Johnson ever succeed in producing a marketable transparent pressure-sensitive film backed tape? A. No.

Q. Did they try to, to your knowledege? A. Yes.

• • • • • • • • • •

560 Q. Over how long a period, to your knowledge, while you were president of the Revolite Corporation? A. Oh, at least three years of my presidency, I would say, from 1933 to 1936.

Q. Were you interested in that project and supervising or prodding the people in the Laboratory during that period of your presidency? A. Yes, constantly.

Q. During that period of time was "Scotch" cellulose tape, transparent film backed pressure-sensitive tape on the market, to your knowledge, throughout that period?

561 A. Yes, I think I can say yes to that.

Q. Had you examined rolls of "Scotch" cellulose tape? A. Yes, we had seen the product many times.

Q. What was the business of Johnson & Johnson as of 1933 and what is it today? A. The business of Johnson & Johnson was largely and basically the manufacture of surgical dressings.

Q. And related products? A. And related products, adhesive products and so forth.

Q. Surgical tape? A. Surgical tape, gauze bands, some cotton, sanitary products.

Q. How early did Johnson & Johnson start manufacturing surgical tape, do you know? A. Well, I believe historically it was one of their original products, and the company is approximately seventy years old.

Q. And they were making surgical tape when you first went with Johnson & Johnson? A. Yes.

• • • • • • • • • •

Cross Examination

By Mr. Spille:

• • • • • • • • • •

584 The Court: And are Exhibits SS through UUU correspondence and memoranda that went back and forth between Johnson & Johnson and Revolite and various officers or individuals of Revolite and Johnson & Johnson in the regular course of the conduct of the business?

The Witness: Yes.

Defendant's Exhibit MMM

April 17, 1935

TRANSPARENT CELLOPHANE TAPE—Progress Report on—

OBJECT—

To produce a satisfactory transparent Cellophane Adhesive Tape.

SUMMARY OF EXPERIMENTAL WORK TO DATE—

Eleven different transparent masses have been prepared and spread on Dupont's Cellophane and Sylvania's Sylphrap.

SUMMARY OF RESULTS TO DATE—

Only one of the masses has been found satisfactory as to aging. This mass known as H does not anchor well enough to either the Cellophane or the Sylphrap.

WORK SCHEDULE—

1. Preparation of a mass similar to Mass H except with improved adhesiveness.

2. Bonding agents are to be tried to assist anchorage of the mass to the Cellophane.

JOHNSON & JOHNSON
Research Laboratory
/s/ H. E. Polhemus

Excerpts from Defendant's Exhibit UUU

(Letterhead of)
INDUSTRIAL TAPE CORPORATION

New Brunswick, N.J.
April 24, 1939

SUBJECT: Texcel Production Summary and Proposal

TO: Mr. W. E. Mayers
to
Mr. Geo. F. Smith

Since January 11, 1939 when the Waldron Slitter was installed we have been attempting to get into commercial

production of Texcel. Since then in spite of the very best and sincere efforts of our Laboratory and Mechanical Departments and the expenditure of nearly $10,000 in salaries, wages, and material the net production has been less than 5,000 lineal 29" yards with a sales value of about $2,500.

Although innumerable experiments have been made and much data obtained, our three principal problems:—

(a) The splitting of the sheet in the slitting and winding process

(b) The transfer of the mass

(c) The rapid and accurate slitting and winding of the individual cores

remain unsolved to the degree that steady and substantial production is impossible. Early in March, during one of our brief periods of seemingly favorable production we were encouraged to the point of releasing Texcel for the market and called meetings of our sales force. During the ensuing two weeks we opened some ninety-three jobber accounts and obtained ample evidence that we can successfully market this line.

Production, however, bogged down and we were forced to ask our salesmen to refrain from further solicitation of Texcel. A large part of the orders taken are still unshipped.

In the meantime our competitors are taking defensive steps to make our entre into this field increasingly difficult. Every week that the production of Texcel is delayed is costing us at least $1,000 in profit on sales.

That the problems involved are difficult cannot be denied. But we do know that they can be and have been solved.

* * * * * * * * * *

L. E. Barnes
/s/ LEB

w

Testimony of **Charles C. Smith,** called as a witness by Minnesota.

Direct Examination

By Mr. Haight:

1167 Q. Will you state your name, please. A. Charles C. Smith.

Q. Where do you live? A. 357 Woodlawn Avenue, St. Paul, Minnesota.

Q. What is your occupation? A. At present, I am general manager of the Cellophane Tape Division of Minnesota Mining Company.

Q. How long have you worked for Minnesota Mining? A. Since October, 1928.

Q. How long have you been connected with the Cellophane Tape Division? A. Since its inception, which was, as I recollect, early in 1930.

Q. Can you just give a brief statement of what your experience has been with the company, what your various

jobs have been, in a general way. A. Through the first approximate year and a half I was engaged in general clerical work in the sales office. From 1930 through 1935 I was
assistant to the sales manager of our Tape Division.
1168 From 1936 through 1941 I was located, first, in Philadelphia for four years, then in New York for two years as eastern sales manager of Cellophane Tape Products. At the end of 1941 I returned to St. Paul and for the first five years was national sales manager of Cellophane Tape, then general sales manager of the Tape Division. And since February of 1952 general manager of the Cellophane Tape Division.

Q. Now back at the time that the Minnesota Mining brought out its first cellophane tapes, were you at that time familiar with some of the uses made of the tape by customers of Minnesota Mining? A. Yes, sir.

Q. Can you tell us what some of those uses were? A. Sealing moistureproof cellophane was one of the more important uses in bakeries, candy manufacturing plants, meat packers and so forth. Also—

• • • • • • • • • • •

1169 A. (continuing)—for the splicing of papers, foils in the manufacturing process. It was used very extensively for attaching window posters; used in offices, banks, schools for general mending and adhering and attaching. It was used in combining two related articles in what is termed a combination deal, such as a package of pancake flour and a bottle of maple syrup. And used in retail stores for package sealing as well as general mending and repairing, and taping of posters and so forth.

• • • • • • • • • • •

1170 Q. I will show you what has been marked for identification as Defendant's Exhibit KKKK, early advertising apparently, a little folder of Minnesota Mining.

• • • • • • • • • •

Q. (continuing) Now I will ask if the Exhibit KKKK illustrates some of the early uses for cellophane tape. A. That is right. It shows several packages wrapped in cellophane or packed in cellophane bags which have been sealed with cellophane tape. It shows, here, the sealing of a box of jigsaw puzzles. It shows here some bakery packages sealed or wrapped in cellophane. Here is an illustration of some meat packages.

This is a confectionery use where, in addition to sealing the cellophane wrapper they also seal the little seasonal decoration ornament. Some more cellophane sealing
1171 uses. Here is a use that involves attaching of window posters. These are representative of combination deals, where they attach in an introductory offer a package of rice to a can of coffee.

A similar deal here on the part of Lipton's Tea. This is a package of some cosmetic items where a new introductory item was attached to a container of a well-established product. Here is a case of attaching a package of cigarette papers to a pouch of tobacco. It is quite a cross-section of general uses.

Q. Now I show you what has been marked for identification as Defendant's Exhibit LLLL, and I believe that is the 1934 one entitled "Which Would You Choose" and ask to what type of use that refers. A. Well, this was primarily intended for the bakery trade prior to cellophane tape. The only way that moistureproof cellophane could be adhered to cakes was by either string or ribbon or bands,

which were quite commonly used at that time. The principal objection to the use of bands was the fact that they tore very easily in the stores and, as a result, made the
1172 merchandise look shopworn, which resulted in heavy returns. Sealing the same packages with cellophane tape kept them neat and clean-looking and considerably reduced the number of returns that resulted.

Now we also illustrate a use here where the bakery salesman carried a roll in his packet that was designed for that purpose and as packages in the store became shopworn, due to handling, many times they could make repairs by patching them up right in the store rather than having to take them back as rejects, which was a very costly item.

Q. I show you a sheet which has been marked for identification as Defendant's Exhibit MMMM which purports to be a statement showing net sales and credits for transparent and colored pressure-sensitive film-backed tape, mostly cellophane tape, November 1930 through December 1941, and I will ask if those figures were compiled at your direction, at your request and under your supervision? A. That is correct, by our chief statistician.

Defendant's Exhibit MMMM, report dated October 20, 1954 entitled *"Net Sales and Credits for Transparent and Colored Pressure-Sensitive Film-Backed Tape (Mostly Cellophane Tape) November, 1930 through December 1941."*

MINNESOTA MINING & MANUFACTURING COMPANY
October 20, 1954

NET SALES AND CREDITS FOR TRANSPARENT AND COLORED PRESSURE-SENSITIVE FILM-BACKED TAPE (MOSTLY CELLOPHANE TAPE) NOVEMBER, 1930 THROUGH DECEMBER, 1941

Year	Total Transparent Tape Sales (almost all under "Scotch" Brand)	Total Colored Tape Sales (almost all under "Scotch" Brand)	% of Unsatisfactory Material—Credit to Sales
1930	$ 21.82		
1931	105,753.40	$ 19,426.82	5.3%
1932	278,294.97	51,278.17	1.5%
1933	381,296.00	36,476.51	1.7%
1934	465,762.08	101,927.58	4.6%
1935	680,622.39	125,734.67	1.4%
1936	1,044,290.87	177,770.58	1.0%
1937	1,567,555.99	298,349.14	.4%
1938	2,181,175.32	383,310.42	.2%
1939	3,018,853.47	541,724.49	.1%
1940	3,865,204.31	510,881.37	.2%
1941	5,789,163.05	802,811.97	.2%

1940 and 1941 sales do not include transparent cellulose acetate tape sales; amounting to $12,250.30 in 1940 and $24,145.57 in 1941. Years previous to 1940 did include transparent cellulose acetate tape sales.

The above figures do not include colored tape with a film backing and a porous fibre sheet embedded in the adhesive sold during the years 1940 and 1941. Colored tape of this type sold during years 1937, 1938 and 1939 is included in the above figures for those years; it was a small percentage of the total for those years.

Returns and credits for the years 1931 and 1932 are shown in company records for all tape products, and are not

broken down for cellophane or film-backed tapes. Total returns and credits for all tape products for the year 1931 were $9,775.34. I estimate that not more (and probably less) than $5,600.00 was for cellophane tape. In the year 1932 returns and credits for all tape products dropped to $8,246.49, and so reduced the returns on credits for cellophane tape to $4,300.00 for the year 1932 ($1,300.00 less than for the year 1931). After the year 1932, the company records show the returns, as above indicated.

/s/ Emil H. Grauenick

Defendant's Exhibit NNNN

"SCOTCH" Cellulose Tape—Total
ADVERTISING EXPENDITURES

	Total Adv. Exp.	% of Total Sales
1931	——	—
1932	8,001.14	2.4
1933	11,682.07	2.8
1934	9,408.58	1.7
1935	15,165.37	1.9
1936	19,062.03	1.6
1937	38,609.55	2.1
1938	56,165.65	2.2
1939	88,975.17	2.5
1940	248,979.43	5.7
1941	265,772.05	4.0

Testimony of **Charles C. Smith**, recalled as a witness by Minnesota.

(Record pages 3864 et seq.)

Direct Examination

By Mr. Haight:

3864 Q. I will ask you if in connection with your work you have supervision over wholesale and retail sales, that is, to that group of distributors of Minnesota Mining, of cellophane tape? A. That is correct.

Q. About how many distributors or jobbers does Minnesota Mining have? A. Between 30 and 35 thousand, according to our records.

3865 The Court: Does that mean, Mr. Smith, between 30 and 35 thousand so-called commercial stationers, or wholesale paper dealers?

The Witness: Wholesale drugstores and grocery stores and all the other contributing types of wholesale.

The Court: And that 35,000 includes all of them?

The Witness: Everything, yes.

The Court: Could you give us some estimate of the number of commercial stationers or wholesale paper dealers?

• • • • • • • • • •

The Witness: I would estimate six to seven thousand paper wholesalers and perhaps four to five thousand stationers, commercial stationers as we call them.

• • • • • • • • • •

Q. Do you require that these distributors or jobbers shall handle 3M tape exclusively? A. No, sir.

Q. And do in fact any of those distributors or job-
3866 bers handle competitive tapes? A. Many thousands of them.

Q. Do you require that if a jobber is to handle one 3M tape he must buy another? A. No, sir.

Q. Now, you have been talking about the situation as of today, and is that a recent situation or has that condition continued for some time? A. It has always been that way.

Q. Do you have any jobbers who handle only one type of tape? A. Yes, we do.

Q. What group is that? A. Well, jewelry jobbers, for example, handle only cellophane tape, and that is pretty generally true of florist type jobbers.

Q. Now, what I was getting at is the jobbers order whatever their customers require, is that it? A. That is right.

• • • • • • • • • • • •

3867 Q. Mr. Smith, do you require any jobber to buy particular tape from 3M? A. No, sir.

Q. Who decides what tape a jobber or distributor shall buy from 3M? A. Well, the jobber would decide that himself based upon his demand for the product.

• • • • • • • • • • • •

Cross Examination

By Mr. Morris:

3883 Q. Now has 3M established a policy of exclusive distributorship? A. What do you mean by exclusive distributorship?

Q. Well, let me put it this way: What is the policy of 3M and what has it been for the last six months, say, as to

the distribution of its tapes by wholesalers? A. The policy has been to sell every wholesaler that is required to properly service the trade in the area involved.

Q. And the policy within that six months period has been to establish exclusive distributorships, hasn't it? A. No, sir.

Q. You mean— A. I don't know what you mean
3884 by exclusive distributorships. Would you clarify that, please?

Q. Well, let us say this: Does 3M, what I mean by that is, does 3M now require its distributors to buy all of their requirements of tape from 3M so that they can have an exclusive distributorship in a given territory? A. No, sir, they never have and don't today.

Q. So, as I understand what you are saying is, that anybody that orders tape, any wholesaler that orders tape, from Minnesota Mining, gets the tape? A. Yes, sir, unless there is some credit reason or other reason why we may not elect to sell them.

Q. And there is absolutely no requirement that they deal only in the Minnesota Mining tape? A. No, sir.

Q. That is, so far as you know? A. Yes, sir.

The Court: But if there were any such requirement, would you know it?

The Witness: Yes, sir.

The Court: And you know that there is or that there isn't any such requirement?

The Witness: There is no requirement that any distributor handle only 3M tape, and there never has been such policy.

3885 Q. That is true, is it, as to cellophane tape? A. Yes, sir.

Q. That is true as to all of the other tapes that 3M sells? A. Yes, sir.

Q. 3M changed its policy here six or eight or 12 months ago, didn't it, its selling policy? A. No, sir.

Q. It used the same selling policy it has always used? A. Yes, sir.

Q. And the authority of the district managers is the same as it has always been? A. Yes, sir.

Q. Now lately there has been a change in the field organization plan; hasn't there been some change? A. No, sir.

Q. Didn't you establish district managers or supervisors of district managers, or something of that sort, in the last few months? A. No, sir; we have had regioual managers over the district managers for many years.

• • • • • • • • • • •

3887 The Court: Mr. Drew testified by deposition that up until a certain period he was autonomous to a degree within his district and if he had any problems he had to take them up with the home office, but then a time came, and relatively recently, when there was a change and w ere somebody else was put in the field, and I thought the office was somewhere in Pennsylvania, to my recollection and, now, if he had a problem he would first go to that person and that person would then go to—

The Witness: Maybe I can clear that up for you. I have been talking about our Retail Division. Mr. Drew is in the Industrial Division. Now we did not have, up until about

two years ago, a regional manager over Industrial. However, we do have them now and have had for at least two years. But we have had a retail regional manager in this area for several years. Does that clear that up?

The Court: Yes.

• • • • • • • • • • •

3911 Q. Was it brought to your attention in 1953 by anyone connected with Minnesota Mining that Technical Tape Corporation tape was being sold by the Crown Office Supply Company? A. Yes, sir.

Q. And what was called to your attention? A. It was called to our — to my attention that they were aggressively pushing the sale of Tech cellophane tape, that they were substituting Technical Tape on customers' orders calling for "Scotch" Brand, and that they were degrading
3912 the name of "Scotch" Brand Tape by pointing out to customers when they asked for "Scotch" tape saying they could furnish it but they were foolish to pay the price if they got something just as good that is cheaper. That is exactly what was reported to me.

Q. And you objected to their selling it cheaper, is that it? A. No, sir, that had nothing to do with our feelings toward Crown Office Supply. We objected to their substituting Technical Tape when customers ordered "Scotch".

• • • • • • • • • • •

3913 A. In substance, I told him that unless Crown Office Supply discontinued the practice of substituting Technical Tape on orders for "Scotch", and unless they discontinued pointing out to customers that they will supply "Scotch" if they want it but "We can give you something just as good at a lower price", that we certainly didn't feel we wanted to do business with them any further.

In addition to their activity in this regard, they were also cheating by having shipments of our product shipped to phoney consumers and later picked up and returned to their stock in order to gain a discount advantage, which certainly was against our policy.

Q. You mean Crown Office Supply was cheating? A. That is correct.

• • • • • • • • • •

3915 Q. You did discontinue selling them? A. Yes, sir.

Q. That is selling tape to Crown Office Supply Company? A. Yes, sir.

Q. You discontinued selling cellophane pressure-sensitive adhesive tape? A. Yes, sir.

Q. And you discontinued selling all tapes manufac-
3916 tured by 3M to this company, didn't you? A. To the best of my knowledge, we did, yes.

Q. Masking tape as well? A. If we sold them masking tape, I am sure we discontinued it.

Q. And you haven't since then sold them any tape? A. Not to my knowledge, no, sir.

Q. You have refused to take their order for tapes, haven't you? A. Yes, sir.

Q. You have refused to take their order for masking tape, haven't you? A. If they sent any in I am sure it would be refused.

• • • • • • • • • •

3922 Q. Do you know the Cammack Office Supply Company of Burlington, North Carolina? A. Yes, by reputation, not personally.

Q. They were buying tape from Minnesota Mining? A. Yes, sir.

Q. And they were cut off? A. No, sir.

Q. They were not? A. No.

Q. Are you sure of that? A. Positive.

Q. Well, how do you know that? A. Because my Atlanta branch manager told me that they are still on our records as an active customer.

* * * * * * * * * *

3925 Q. So you have to approve the cutting-off or disapprove it, is that correct? A. That's correct.

Q. And when they are cut off it is with your approval? A. That's correct.

3926 Q. We were on this Anchor Office Supply Company of Cleveland. A man by the name of Rosenblatt runs that. I think you said you knew or heard of that company? A. That's right.

Q. And through your own organization, the 3M organization? A. That's right.

Q. Now 3M sold that company tape? A. That's right.

Q. The whole line of tape? A. I wouldn't know how extensive their purchases were. I know that they are set up to buy our products.

Q. Do you remember that there was some sort of a discussion at the 3M offices in St. Paul about this Aviation Supply Company within the last year or so? A. Who is Aviation Supply?

Q. I am sorry, I used the wrong name. The Anchor Office Supply Company. A. Yes, I know there was discussion.

Q. And that discussion had to do with shutting them off? No, sir.

3927 Q. What was the discussion? A. The discussion had to do with certain unethical practices, such as substituting and cheating on drop shipments, such as we talked about on Crown Office Supply.

Q. And there was no discussion about cutting sales of tape off from them because of that cheating? A. The practice was discussed with them and they agreed to cease the practice. We have never refused to sell them.

Q. Just how did they cheat? A. By substituting competitive brands on orders calling for "Scotch" and also by attempting to fake drop shipments in order to gain a better discount for stock.

Q. You have talked about substituting other tapes such as "Tuck" tape for "Scotch". A. I didn't say such as "Tuck" tape.

Q. Well, all right. You have talked about, let us say, that some of the dealers or distributors substituted tape made by some other company. A. Some other manufacturer, yes.

Q. When the customer called for "Scotch" tape. A. That's right.

Q. Did the customer in those instances call for
3928 "Scotch" tape or "Scotch" Brand Tape? A. I wouldn't be sure of that.

Q. Now you don't know, either, whether those substitutions, as you call them, were with the consent of the customer, do you? A. No, sir.

Q. You remember also that in connection with this An-

chor Office Supply Company — well, let us go back for a moment on that same company. There drop shipments were made, the ones you knew about, the ones that were discussed, were made to a lunchroom or a candy store or something nearby, weren't they? A. I don't recall that.

Q. You don't know that? A. No.

Q. How did you know that they were cheating? Where did you get that information from? A. It was reported to me by our Cleveland sales manager.

Q. And he simply reported that there were drop shipments which were not legitimate drop shipments? A. That's correct.

Q. He didn't tell you where they were made? A. I
3929 didn't bother to ask; I didn't think it was necessary.

Q. He didn't tell you where they were made? A. No, sir.

• • • • • • • • • • •

3937 Q. Now, when 3M cut off some or one of its customers, was it always because they had either been cheating in the manner you said, or that they were palming off or substituting some other manufacturer's tape for 3M tape? A. Not always. We have discontinued selling certain customers for credit reasons.

Q. Well, outside of credit reasons. A. Generally speaking those were the principal reasons.

Q. Now, what did you understand I meant by sub-
3938 stituting or palming off? A. I understood that to mean that upon the order of a customer for "Scotch" Brand Cellophane Tape the order was not filled as specified.

Q. Without the knowledge of the customer, is that what you mean? A. With or without.

Q. So 3M's compaint is that they don't want a competitor to push — rather they don't want the distributor to push a competitor's tape ahead of 3M tape? A. Not at the expense of 3M tape, no.

Q. Not even if the customer says "It is all right. I will take it"? A. I did not say that, Mr. Morris.

Q. I am asking you that. A. I said that when a distributor on an order for "Scotch" Brand Tape goes to the customer and says, "I can give you 'Scotch' Brand if you want it, but I will give you a tape which is just as good and at a cheaper price", I consider that unfair, and I would certainly not cooperate very long with that type of distributor.

Q. And you would cut him off? A. I think I would, yes.

3939 Q. And have you done so? A. Yes, we have in the case of Crown Office Supply for one.

Testimony of **John J. Bennison**, called as a witness by Minnesota.

(Record pages 3941 et seq.)

Direct Examination

By Mr. Haight:

3941 Q. Will you state your name, please. A. John J. Bennison.

Q. Where do you live, Mr. Bennison? A. 56 Downey Drive, Tenafly, New Jersey.

Q. By whom are you employed? A. Minnesota Mining & Manufacturing Company.

3942 Q. How long have you been with that company? A. About 18½ years.

Q. What is your present position? A. I am eastern regional sales manager, Industrial Tape Division.

Q. And has your experience with the company been in the sales end? A. Always, yes, sir.

Q. The eastern region covers what area of the United States? A. Well, I usually answer that by saying the Eastern Seaboard.

Q. Now you mentioned the industrial trade. Can you state generally what that group is? A. Well, our men spend the bulk of their time calling on manufacturing concerns and the distributors who normally service that class of trade.

Q. Now, when you sell to those distributors do you sell on the condition or with the requirement that they shall deal only in 3M tape? A. Absolutely not.

Q. Do any of your distributors who purchase 3M tape in fact purchase from others also? A. Yes, definitely.

3943 Q. Do you require that any of your jobbers or distributors handle and purchase more than any one type of tape? A. Would you repeat that question Mr. Haight, please?

Q. Well, I think it is a rather awkward question and I will rephrase it. Do you require a jobber if he is to handle one type of tape to also purchase another type? A. No, sir.

Q. Who determines what types of 3M tape the jobber will buy? A. Well, I think that is pretty well determined by the customers that that jobber is servicing.

Q. But 3M doesn't determine it? A. No, sir.

Mr. Morris: I object to the question as being leading.

The Court: Sustained.

Mr. Haight: That is all.

Mr. Morris: No cross.

Testimony of **Charles Lloyd Arnold,** sole owner of Lloyd's Office Supply, Pawtucket, Rhode Island, called by Technical:

(Record pages 2796 et seq.)

Direct Examination

By Mr. Spille:

• • • • • • • • • •

By the Court:

2796 Q. What was the total volume of your business for 1954? A. Approximately $100,000 gross. It will be a little bit higher, but I don't have the exact figures; we haven't closed our books for 1954 as yet.

Q. What was it in 1953? A. 1953, I think it was $96,000, in that vicinity.

Q. In 1952? A. '52 was, I believe it was $76,000 in 1952.

Q. In 1951? A. '51, it was either 56 or 58 thousand.

By Mr. Spille:

Q. When did you start in business, Mr. Arnold? A. I believe it was 1949, it was either 1948 or 1949; I started the middle of the year, and I don't —

Q. What was your gross volume of business the first full year you were in business? A. The first full year was 26,000.

• • • • • • • • • • •

2799 The Court: And you say in 1952 your total sales were $76,000?

The Witness: That is right. That is on everything.

The Court: Your total sales?

The Witness: Yes.

The Court: And now included in those total sales were "Scotch" Brand Cellophane Tape, or all tapes of $2,000?

The Witness: That is right, your Honor.

The Court: All tapes?

The Witness: That is right.

• • • • • • • • • • •

By Mr. Spille:

2807 Q. Now after the fall of 1953 did you thereafter sell any pressure-sensitive tape to Glasscraft? A. Yes. but it wasn't for quite a while afterward because—

Q. What brand of tape or what kind of tape did you sell to Glasscraft? When did business resume, if it ever resumed? A. Well, I didn't sell them any tape; I did sell them cellophane tape which is, of course, with them was a very small item; they just used it in their offices. But I was trying to get them to buy a tape that "Tuck" was making; it was a high temperature, and at the time they hadn't — I think it was fairly new and of course they had to try it and test it, it had to be sent out on the rolls to

their salesmen to see if it held up, and one thing and another; so that it took quite a while. I would say offhand it must have been six or eight months before they bought any of this other tape.

• • • • • • • • • • •

2808 Q. Do you have any interest in any manner whatsoever in the Glasscraft Company? A. I do have stock in the company.

Q. When did you first obtain stock in the company? A. When they first started in business.

Q. Approximately when was that, sir? A. It would be about 1950.

Q. Do you still have a stock interest in Glasscraft? A. Yes, I do have.

• • • • • • • • • • •

2811 The Court: Now this high temperature tape that you sold to the Glasscraft Company, did you stock any of that tape?

The Witness: No, that particular tape was not a stock item with anybody in any quantity.

The Court: You didn't stock it?

The Witness: No, I did not.

The Court: When you got an order from Glasscraft for this high temperature tape, you would forward that order on to Minnesota Mining?

The Witness: That's right.

The Court: And did Minnesota Mining ship the order to you or directly to the customer?

The Witness: No, right to the customer.

The Court: So that all you were really acting as was a salesman for Minnesota Mining in getting your
2812 intermediate commission.

The Witness: Well, that's right.

• • • • • • • • • • •

2813 The Court: What function did you serve in this whole economic process when you sold a high temperature tape? What utility, what service did you render?

The Witness: Well, originally, your Honor, you see the purpose as a jobber is to go out and contact users of tape; in other words, we act as salesmen for the company, for several different companies, not just Minnesota or Tech or anybody else, we act as a salesman for several companies.

• • • • • • • • • • •

2814 The Court: As a matter of fact, you rendered no economic function or utility here at all except to act as a salesman for Minnesota Mining, and for that you got a commission?

The Witness: That's right, sir.

• • • • • • • • • • •

Cross Examination

By Mr. Haight:

2817 Q. You testified on direct examination that you started buying "Tuck" tape in early 1953 of this year, corrected it to 1952, and now you would like to correct it to 1951, wouldn't you? A. Did I say '51?

• • • • • • • • • • •

2818 The Court: When did you first start handling the "Tuck" tape? Was it in 1951, 1952 or 1953?

The Witness: Well, I said 1953, and then I said 1952. I will say to you now that I did not come here prepared with any records or any figures, but I can check on my books and find out if you want me to.

Q. Now, in March of last year you testified under oath that it was 1951, didn't you? A. At that time I had no records whatsoever, and if you remember if you were there, I came up there out of the cold just to testify as to what had happened to me.

• • • • • • • • • • •

2819 The Witness: Well, yes, in my testimony in Boston I said I started to buy "Tuck" tape in 1951, and if I said it then I must have started to buy the tape in 1951 from Technical Tape. However, I don't remember at this time when I started to buy it, or when I did not start
2820 to buy it, do you see?

• • • • • • • • • • •

Q. Now, I show you what has been marked for identification as Plaintiff's Exhibit 41, and I will ask you if you reread your deposition since you gave this testimony up in Boston? A. No, I have not.

Q. Did you discuss it with anyone since you gave it? A. No, I haven't.

• • • • • • • • • • •

Q. I call your attention to page 12 of your deposition and to the question, the first question on the page, testimony given by you in Boston on March 26, 1954, and I will ask you were you asked this question and did you make this answer:

2821 "Q. Can you tell the name of the other brand of pressure-sensitive tape that you began to stock at that time? A. Well, at that particular time when I started

to — when I took another brand, let us put it that way, I took on Technical Tape, better known as "Tuck" in the trade."

Now, was that question asked of you and did you so answer? A. Yes, I did, but lookin, back here I think—according to this, that is what I said.

Q. All right. Then were you asked this question and did you make this answer:

"Q. So that from 1951, the middle of 1951 on, you handled both lines of tape? A. That's right."

A. That is right.

Q. And that "both lines of tape" referred to "Scotch" Brand and "Tuck" Brand, did it not? A. That is right, sir.

Q. Then from 1951 through 1953, up until September, or the fall of 1953, you sold both Technical Tape and various pressure-sensitive tapes, and you also sold the 3M product? A. That is right.

2822 Q. Is that right? A. That is right.

Q. And during that entire time until the time that your relations with 3M were terminated, until the last incident, you had no complaint from 3M about your handling the "Tuck" tape, did you? A. No, I did not.

. . . . . .

2825 Q. Well, now, what percentage of your sales in 1953 up until the time that you quit selling and purchasing Minnesota Mining products, what percentage of your sales of 3M products were to Glasscraft?

. . . . . .

A. 81 per cent.

. . . . . .

2826 Q. And that accords with your recollection, doesn't it? A. That is right.

Q. That 81 per cent of the sales you made in the year 1933—

The Court: 1953.

Mr. Spille: 1953.

Q. —1953 were sales to Glasscraft? A. That is right.

Q. Now, those were shipments where 3M drop shipped right to Glasscraft, weren't they? A. That is right.

Q. And you might have actually sold them a little bit additional to that, might you not? Couldn't you have done that? A. Well, that was also in this questionnaire as I noticed it, but I think as I mentioned a little while ago, whatever they bought was very small.

Q. All right. Now, what percentage of your sales of tape, of 3M tape in 1952 were to Glasscraft? A. Isn't that in the record? I don't remember. I mean is it or what?

2827 Q. Well, let me refresh your recollection. A. You see, when I—

Q. Just a moment. Let me refresh your recollection. A. Yes.

Q. You did not sell a penny's worth of tape to Glasscraft in 1952, did you? A. No, sir.

. . . . . .

2829 The Witness: . . . at the time that they were asked who they wanted to buy it from, that they told him a particular company. Now, they were—

The Court: That is, Glasscraft told them a particular company?

The Witness: That is right, your Honor. Now, this tape that I sold them was a very small portion of the tape that they had bought prior to that.

• • • • • • • • • • •

2830 Q. Now, the fact is that Glasscraft had been buying this identical tape for some time before you be-
2831 gan to service their account at all, hadn't they? A. They had been—I served Glasscraft from the time they went into business, and as I told you that a minute ago, that when they first went in business I sent the Minnesota man over there.

• • • • • • • • • • •

2832 Q. In your Boston deposition, page 34— A. What page?

Q. Page 34. A. All right.

Q. I will read a question and answer and ask you whether you were asked this question and whether you made this answer:

> "Q. Now, Glasscraft had been buying this pressure-sensitive textile tape before you started servicing the account? A. That is right."

Did you so testify? A. Well, when I said servicing the account, I was referring to the servicing of that particular tape, not the account itself, because I can show you records if you want to see them that I had been selling them practically everything that I could sell them since they went into business. Now, I bought stock in the company when they first started in the business. Now, who else has a better chance of selling a company something than one
2833 who is a stockholder of the company?

• • • • • • • • • • •

2834 Q. How much Minnesota Mining tape did you buy for putting in your stock in 1953? A. Well, I don't know exactly how much I bought for putting in stock.
2835 That I don't know.

• • • • • • • • • • •

Q. And you never found it in the year 1953 necessary to buy much 3M tape to stock and to take care of your customers, did you? A. I bought what I needed from them, yes.

Q. And you didn't need much, in your opinion, did you? A. Well, as I said before, I had nothing to do with what people asked for. If they asked for "Tuck" tape I gave them "Tuck" tape. If they asked for Minnesota Mining or "Scotch" tape I gave them "Scotch" tape.

• • • • • • • • • • •

2837 Q. And the three that you mentioned are the only ones that make transparent cellophane tape? A. To my knowledge, yes.

Q. Let me ask you did you get a larger profit by selling "Tuck" tape than you did on 3M tape? A. In most cases, yes.

Q. Well, in no instance do you get less, do you? A. Well, that depends. . . . sometimes you have to take a little bit off the suggested price in order to meet their competition.

• • • • • • • • • • •

Q. — just speaking generally, it is more profitable to you to sell "Tuck" rather than 3M, isn't it? A. That's right, yes, it is.

The Court: Mr. Arnold, do I get the impression from what you have said that you had so varied a line that you

did not have an opportunity to be a salesman at all,
2838 that you were just an order taker?

The Witness: At times that is all I was.

The Court: You were just an order taker, not a salesman?

The Witness: That's right, your Honor.

• • • • • • • • • •

2839 The Court: Did it ever happen where, when you took an order for "Scotch" tape you filled it with "Tuck" tape?

The Witness: It may have been, but I don't recall whether it did or not.

The Court: All right.

• • • • • • • • • •

2841 The Court: Mr. Arnold, can you split this area that you occupied in 1953 so that we can tell what proportion of it was taken up with 3M products that you stocked?

The Witness: Well, we have a counter —

The Court: Give me the size of it.

The Witness: The counter is about as big as this bench and there are shelves on it —

The Court: Can't you give me an answer to that question?

The Witness: It would be an area of about 120 feet, but that area was not all stocked. It was divided between "Scotch" tape and "Tuck" tape.

The Court: Can you give me an answer to my question, if you will, please.

The Witness: Well, the split area was maybe about
2842 three by ten, but then you have about four shelves, and, well, you have masking tape on the top of it, so I don't know exactly what that area would be, but it was very small.

The Court: How much of that 120 feet — how much of the 120 square foot shelf area did you take up with the 3M products?

The Witness: In 1953?

The Court: Yes.

The Witness: About a quarter at the most.

• • • • • • • • • •

2843 The Court: You were selling "Tuck" tape from 1951 on, weren't you?

The Witness: That wasn't the only thing that I was selling.

The Court: And you were making a big profit on the "Tuck" tape, too, weren't you?

The Witness: But I mean that was not the only thing. There were so many other items on my line, and up until 1953, you see, I was alone, and I was on the road and I had no other salesmen, but since then I have put salesmen on the road, you see, because as you said before to me, I was more or less of an order taker for quite a while, and I realized that. You see, I did not have the time to do it, so I had to employ other salesmen to go out and take care of some of these things.

• • • • • • • • • •

2844 The Court: Well, you feel that 3M did not deal fairly with you on the Glasscraft account, don't you?

The Witness: No, I don't. You see, the way it happened was —

The Court: In the vernacular, you are sore at them?

Mr. Morris: I think he testified to that, your Honor.

The Witness: I said that in my testimony in Boston.

* * * * * * * * * *

Recross Examination

By Mr. Haight:

2851 Q. That is the only instance where you lost any customer, even on an order, was where Minnesota Mining made the only product of its kind and they had to get the 3M product and you couldn't get a substitute from "Tuck" or someone else; that is right, isn't it? A. No, I just told you a little while ago that I have found out since that there was one customer that I know of; . . .

2852 But I know that there is one customer who buys quite a bit of tape, as a matter of fact, since I gave this testimony I kept pestering him and pestering him, I wanted to know why he wasn't buying any more tape from me, and—

Q. How much business did he do with you? How much of your 3M tape sales were made to him in the year 1953, what percentage? A. I had just started to sell him tape, as a matter of fact, in 1953.

Q. What month? A. It was either July or August.

Q. Had he never used 3M tape before? A. Oh, sure.

Q. But he had been getting it from someone else? A. That's right.

Q. How much did you sell him? A. Well, I initially ordered them for 144 rolls of tape. As a matter of fact, I couldn't complete the order.

Q. So that the only customer that you lost was not one that you developed for the 3M products, but that 3M
2853 had developed itself and the man insisted on the 3M product, is that right? A. Well, that is right in a sense, but if I can explain how this thing happened, . . .

• • • • • • • • • •

2855 The Court: Did you carry a substantial quantity of tape or didn't you?

The Witness: I did, your Honor.

• • • • • • • • • • •

2856 The Witness: If I had $150 worth of tape in stock—

The Court: That was substantial?

The Witness: That was substantial to take care of what I needed.

The Court: All right. That is what I wanted to find out.

• • • • • • • • • • •

2857 The Court: Your volume and your type of customer. Your volume, apparently, was about $500 in this kind of tape and you carried about $150 and that $150 was substantial in relation to your volume?

The Witness: That's right, your Honor.

The Court: That is all.

• • • • • • • • • • •

Testimony of Elizabeth Arnold, called as a witness by Technical.

(Record pages 2871 et seq.)

Cross Examination

By Mr. Haight:

2871 Q. Do you have any records with you? A. No, I am afraid I don't.

Q. Now, you discussed your testimony in this case prior to taking the stand? A. No, I wouldn't say that. They just asked me if I would mind.

Q. And when were you first asked? A. Just this morning.

Q. That is, you came to town not expecting to testify at all? A. No, I was hoping it was going to be a pleasure trip.

• • • • • • • • • • •

2878 Q. I believe you just told me that in 1954 you sold about $6,000 worth of tape of all kinds. A. That is right.

Q. And about how much did you sell in 1953? A.
2879 Well, I keep four books and I don't feel truthfully that I could tell you what I paid for tape, . . .

• • • • • • • • • • •

2881 The Witness: Your Honor, may I have one of those sheets, please?

The Court: You may ask counsel for it.

The Witness: On one of those sheets I made a few notes before I came down, but I did not have everything.

Mr. Haight: Just a moment.

Q. Did you bring any of your record sheets with
2882 you, any of your ledger sheets? A. I just made a few notes and summaries. They are not from my books.

. . . . . .

Q. How did you happen to bring this one with you? A. Well, that was an accident. I mean I tried to go through all these files, trying to get some information from them, but apparently I slipped up on this one.

Q. Now, what other sheets did you bring with you?

Mr. Morris: We have got some here that we had her make up when we contemplated asking Mr. Arnold about these. When we asked Mr. Arnold he had her make them up.

The Witness: This is just a summary of the total with the purchases in 1949. Now, I had nothing to do with this. I just took those.

I just took those invoices here that I had not paid
2883 for 1949.

The Court: What was the total?

The Witness: This was $1,927.

Q. Is that for 1950 or what? A. That is 1949.

Q. And the amount is $1,927.80? A. That is right. That is when he first started in business, see. That is right, just taken from old records.

Q. Now, as to 1950. A. And this is 1950, see, as nearly as I could find from the invoices. And the amount is $1,710.20.

Q. $1,710.20? A. Yes, to be exact. Then in 1951 it is not complete. I don't know what happened to this. I made

a note on this. Now this is from — this is mine that I did in 1952, which I had just started, or when I had just started working for Mr. Arnold in October, 1951, see, and this is what I forwarded from 1951, and so it does not give you a total because these are my invoices and these are the ones that I have paid.

• • • • • • • • • • •

2884 Q. Well, now, can you from this sheet tell us the total payments to Minnesota Mining by you in 1952? A. Don't ask me to do that in my head. I work with a calculator.

• • • • • • • • • • •

Q. And these will represent actual payments in 1952 and I will read the figures off and you see if they are right.

• • • • • • • • • • •

2885 Q. $212.34. A. Yes.

Q. $161.95. A. Yes.

Q. $72.15. A. Yes.

Q. $96.77. A. Yes.

Q. $715.42. A. Yes.

2886 Q. $247.46. A. Yes.

Q. $1,802.20. A. Yes.

Q. $138.57. A. Yes.

Q. $221.39. A. Yes.

Q. $120.61. A. Yes.

Q. $207.90. A. Yes.

Q. $290.33. A. Yes.

Q. $101.40. A. Yes.

Q. $138.37. A. Yes.

Q. And $79.59, is that right? A. That is right.

The Court: And the total of those sums represents the total purchases, does it not?

The Witness: Yes.

. . . . . .

2887 Q. Now, did you give the total for 1953? A. No, I did not.

Q. Well, I will read off the payments in 1953. The first one, $298.13. A. Yes.

Q. That was for the payment of an invoice at the end of the year? A. That is right.

Q. Then $400.33. A. Yes.

Q. $71.76. A. Yes.

Q. $81.50. A. Yes.

Q. $46.32. A. Yes.

2888 Q. $21.58. A. Yes.

Q. $63.60. A. Yes.

Q. And $226.42, is that correct? A. That is right.

Excerpts from Plaintiff's Exhibit 142

Deposition Testimony of Plaintiff's Witness—**Eli Ackerman.**

(Page numbers at left refer to pages of deposition transcript.)

Cross Examination

By Mr. M. K. Hobbs:

. . . . . .

63 Q. When did your company first start to handle "Tuck" brand cellophane tape? A. At the same time.

. . . . . .

64 Q. And you think that was in May, 1952? A. That is right. I would say the latter part of the spring or the early part of the summer. I don't recall what month, the exact day, or what it was, but I know it was—if, for argument's sake, we want to put it at about the middle of the year, that is it. It might be thirty days either way.

Q. That is close enough. We won't hold you any closer than that. Now, when your company began selling the "Tuck" line, and I include in "Tuck" line both the masking tape and the cellophane tape, did you do anything to announce to your customers and prospective customers that you were taking on that "Tuck" line? A. Yes, we did.

65 Q. What did you do about that? A. The method of announcement?

Q. Yes. A. Well, we held a sales meeting with our salesmen and told them we were taking on a new line of tape, the Technical Tape "Tuck" line, and to my estimation, I thought it was a good line of merchandise, it was comparable to what we were selling, and the price was lower.

Q. Now, that was to your salesmen? A. That is right, and they in turn conveyed that to their customers.

Q. How many salesmen do you have, or did you have at this time? A. At that time I would say we had twelve men.

Q. You mentioned yesterday something about a circular. Did you send out a circular announcing your new line of pressure-sensitive tapes? A. Yes, we incorporated that in our circular, yes.

Q. You sent that both to customers and prospective customers? A. Right.

Q. About how many did you send out of these
66 circulars? A. Well, now—

Q. Well, was it a matter of hundreds or thousands or what? A. Well, yes, it was thousands. I am just trying to recall what that mailing piece consisted of. It might have been about a quarter of a million pieces.

• • • • • • • • • • •

67 Q. In the same circular did you advertise "Scotch" brand tapes? A. No, sir I don't think we did.

Q. Just the "Tuck" brand? A. Right.

Q. And you said nothing about the relative prices of them? A. Oh, no sir.

• • • • • • • • • • •

69 Q. Did you make more money in the sale of
"Tuck" brand tapes than you did in the sale of
70 Minnesota Mining tapes? A. That is right.

Q. It was to your advantage, therefore, to sell "Tuck" brand tapes, if you could? A. Moneywise, you are correct.

Q. Therefore, you tried to push that tape? A. That is right.

Q. Now, if a customer asked for "Scotch" brand tape,

did you try to convince that customer that he should buy "Tuck" brand instead? A. Yes, at a lower price.

Q. At a lower price? A. That is right.

Q. To his advantage and to your advantage, you thought? A. That is right.

Q. But suppose a customer came and asked for a "Scotch" brand tape— A. Who insisted on it?

Q. Yes. A. We gave him "Scotch" brand.

. . . . . .

86 Q. Mr. Ackerman, I hand you what has been marked Defendant's Ackerman Exhibit 1 for identification. Is that the circular which you were referring to a few minutes ago in your examination with me? A. Right.

87 Q. Now, is that circular dated? A. I don't see any date on here. I don't believe it is.

Q. You will have to refresh my recollection. You told me once, but I have forgotten, your best judgment as to when that was published and distributed. A. In the fall of 1952.

. . . . . .

Q. Now, I call your attention to the last page of this exhibit, Mr. Ackerman. By the last page, I mean the back cover. That carries the announcement of "Tuck" brand cellophane tape, does it not? A. Right.

Q. It takes up more than half the page? A. Right.

Q. Now you follow me and see if I read correctly your announcement found in this presentation of "Tuck" brand tape:

88 "Top quality transparent cellophane tape. An entirely new cellophane tape with exclusive specifications."

Now let us pause there a minute. Why did you say this was an entirely new transparent tape? A. Why did I say it?

Q. Yes. A. Well, I would have to recheck our copy that our advertising man wrote, to be frank with you.

Q. Well, it is just like "Scotch" brand tape, isn't it? A. Yes. It answers the same purpose.

Q. Then it was not right to say it was an entirely new transparent tape, was it? A. I suppose what they meant is that it was a new line of tape.

Q. Well, now let us continue with the quoting of this announcement:

"Clear and fully transparent, premium quality cellophane, with superior and uniform tack."

Is it superior to "Scotch" brand tape in tack? A. I imagine that would be a question for experts to answer.

89 Q. You don't know? A. Do I know personally if it is superior?

Q. Yes. A. Well, like I say, I am not an expert on cellophane tape. I couldn't answer that question properly. I don't know.

Q. But your company made this representation to the customers, did it not? A. Yes. If it is there, we did.

Q. Now, I continue:

"Priced sensibly to save you money! The tape with a million office and household uses. Fits all standard dispensers. Write for quotation on larger quantities."

Now, this phrase that I read, "Priced sensibly to save you money," that is printed in bold face type, is it not? A. Bold face?

Q. Bold face, yes. A. Yes.

Q. That was meant to entice customers to buy this tape instead of Minnesota Mining tape? A. Well, either
90 Minnesota Mining or Industrial tape, or I believe at that time Pax was still selling tape. I don't recall. There were other people manufacturing cellophane tape, exclusive of Minnesota Mining.

Q. But this, your "Tuck" tape, you are informing your customers could be bought at a less price than the other tapes? A. That is right.

Q. So your company was pushing this tape to the exclusion of Minnesota Mining tape?

. . . . . .

A. All other tapes.

91 Q. Including Minnesota Mining tape? A. Yes. They are considered a manufacturer of cellophane tape.

. . . . . .

94 Q. Now, what was the amount of purchases from the Minnesota Mining & Manufacturing Company in the year 1950? A. $36,492.15.

Q. Now, the other figure you have got is purchases from Minnesota Mining Company for the year 1952? A. 1952 was $27,780.99.

Q. Give it to me again, will you? A. $27,780.99.

. . . . . .

Deposition Testimony of Plaintiff's Witness—

R. V. Arvey.

(Page numbers at left refer to pages of deposition transcript.)

Cross Examination

By Mr. H. J. Kinney:

156 Q. In earlier catalogs you had included Minne-
157 sota Mining's products, had you not? A. Yes. In some mailing pieces we had it probably before we did business with Technical Tape, yes.

Q. What led you to drop the Minnesota Mining products from your catalog? A. Because we were showing our customers that we had a tape that was less money.

. . . . . .

158 Q. Last week, I understand Mr. Schultz ordered some masking tape from Minnesota Mining at your request? A. That is right. He phoned the order in and mailed that copy marked "Confirming".

Q. Now, who asked you to place that order? A. Who asked me to place the order?

Q. Yes. A. Nobody asked me to place the order. I testified that Mr. Kipnis called me and asked me if we are still doing business with Minnesota Mining, and I said, no, we weren't.

Q. Then what did Mr. Kipnis say? A. What did he say?

Q. Yes. A. That is all that he said, and I of my
159 own volition sent out the order.

Q. The telephone conversation just stopped there? He called up and said, "Do you still do business with Minnesota Mining?" and you said, "No, we don't"? A. I said, "No, and I haven't tried. I will try again."

Q. Well, the inference of his call was that you should try again, wasn't it? A. No.

Excerpts from Plaintiff's Exhibit 144

Deposition Testimony of Plaintiff's Witness—**Samuel S. Rosendorf, Jr.**

(Page numbers at left refer to pages of deposition transcript.)

Cross Examination

By Mr. J. W. Hofeldt:

21 Q. Disregarding drop shipments, what were your purchases from Minnesota during the year of 1953? A. I couldn't answer that question. I do not know.

Q. They were very small, were they not? A. We do have certain accounts out of town which all the tape that we have sold have been shipped direct, instead of bringing them into our company and reshipping them. Where there were 72 rolls or more, I think was the maximum discount at that time. We would have them shipped direct to the customer. But I would say that drop shipments were the smaller part of our business.

Q. During the year 1953?

. . . . . .

22 A. In the year of 1953 the majority of our shipments were drop shipments. I didn't understand the question before.

• • • • • • • • • • •

24 Q. What were your average purchases for stock purposes during 1952, by months, now? A. I couldn't answer that question. We purchased approximately I would say 3 thousand dollars, which would be roughly speaking $250.00 a month, would it not?

Q. Yes. A. I mean, I just do not know except that we did check the year before and I think our purchase for that year ran approximately 35 hundred dollars.

Q. That was all for stock? A. No. It wasn't all for stock. It was some drop shipments too. That is what I answered originally when I misunderstood which year you were referring to.

Q. You testified in the fall of 1952 you heard of Technical Tape Corporation. Then you also testified on direct examination that you sold Minnesota Mining and
25 Manufacturing Company tapes to December 1953? A. That is right.

Q. When did you again begin handling "Tuck" brand tapes, or when did you begin, I mean? A. In the fall of 1952.

• • • • • • • • • • •

Q. In your direct examination you stated that you had bought, you had purchased from Minnesota Mining
26 certain types of tapes, and from Technical Tape— A. No, it was just whatever tapes that we may have needed to fill customers' orders.

• • • • • • • • • • •

27 Q. Disregarding Reynolds now, do your other customers receive special attention, to your customers have you pushed "Tuck" tape? A. We have pushed it.

Q. To the exclusion of Minnesota Mining tapes? A. I wouldn't say to the exclusion of any one tape.

Q. But you have more aggressively pushed "Tuck" brand tapes than others? A. Yes, that is to our advantage.

Q. It was to your advantage, and you did so? A. That is correct.

Q. It was to your advantage pocket wise? A. That is right.

28 Q. As to your over the counter sales, have you aggressively pushed "Tuck" tape? A. Well, I would say this, that our over the counter sales are mostly for the smaller rolls of tape. The 15 and 25 cent rolls. We have always usually put Minnesota or Texcel on that particular type of item.

Q. But on other size tapes— A. We have had Texcel in stock since December of 1953. We have carried some tapes of Texcel in stock, as well as Technical tape.

Q. Prior to December on tapes where Technical tape had the same size tapes that were called for by the customers, did you push it in preference to Minnesota Mining tape? A. Yes, I would say that we did.

Q. You have pointed out to the customer the price difference? A. That is correct.

Q. You have made it a point of doing that? A. Yes.

Q. At every possible opportunity? A. Well, when it

was possible we did, because we believe that the tape manufactured by Technical Tape was in every respect as good as that manufactured by Minnesota Mining. We could
29 see no difference in the quality of the tape.

Q. But you pushed "Tuck" tape whenever the opportunity arose, you did that? A. That is right.

Q. To the exclusion of Minnesota Mining tapes? A. That is correct.

Q. And that is also true of your other customers, is it not? A. Yes. However, if a customer asked us for a particular brand of tape, a lot of people just come in and ask for a roll of tape. When we had calls for Minnesota tape we secured (it). If we didn't have it in stock, we went out and got it and supplied it.

Q. If they insisted upon it? A. That is right.

Q. But you first tried to sell them "Tuck"? A. We may have shown them the tape and said this is the tape which we consider just as good, and it may be just a few cents less.

Q. And you have also done that even on tapes that you have had Minnesota Mining tapes that you have had in stock, have you not? A. Yes.

Q. When a customer came in and asked for Min-
30 sota Mining tape— A. We might have shown him both tapes and said that we can save you—

Q. Even though they had asked for "Scotch" brand tapes? A. That is right.

• • • • • • • • • •

31 Q. As to those paper companies, are they handling both? A. The paper company I think, I would not be sure

—I have been told that they handled products of
32 Minnesota, and they also are handling Technical Tape.

• • • • • • • • • • •

34 Q. Did you give your salesmen any instructions as to when they solicited orders that they were to push Technical Tape? A. I don't recall if I gave them orders. We had a sales meeting when we took the line on, and their salesmen explained the various setups to our salesmen.

Q. Was it a company policy after that time to push Technical Tape? A. Yes, sir.

Q. To the exclusion of Minnesota Mining? A. I wouldn't say to the exclusion, but it was—

Q. In preference to it? A. Yes. I would say so.

Q. And those were instructions to salesmen? A. That is correct.

Q. You had submitted an affidavit which was executed by you on the 28th day of May, 1954? A. I have seen a copy of that.

Q. Do you know who that affidavit was prepared
35 by? A. Prepared by?

Q. Yes. A. The firm of lawyers, you mean?

Q. Yes. A. Yes, I can tell you (looking in notes in pocket). No, I have a copy, but not the letter.

Q. Do they represent Technical Tape Corporation? A. As far as I know they do.

Q. They were not your attorneys? A. No.

Q. Did you volunteer this information to Technical Tape Corporation? A. Yes.

Q. You told them about it? A. That is correct.

Q. Why did you do that? A. Well, when we were cut off by Minnesota, we naturally thought it was to our best advantage to tell our other factory just what happened.

. . . . . .

37 Q. You have testified that as far as you were concerned the cellophane tape of Technical Tape Corporation was identical with that of Minnesota Mining. A. I think I stated that it was just as good. Now, it so happens that we received a contract from the State of Virginia for the period of July 1, 1954 to June 30, 1955, for cellophane tape. We submitted the samples of "Tuck" Tape, and the State of Virginia tested it against other brands of cellophane tape that they were quoted on.

Q. Including Minnesota? A. That is something I don't know. And they found that in their tests, they had a firm of chemists, people of that nature, to test the tape. They found that it was equally as good as other tape or tapes that they had examined at that time, and we were given a contract.

Q. Do you know of any difference between the two? A. No, I do not.

Q. You sell them to the same users, or did you sell both cellophane tapes, the "Tuck" brand and "Scotch" brand to the same type users? A. Yes, sir.

. . . . . .

Recross Examination

By Mr. Hofeldt:

40 Q. Mr. Rosendorf, at my request you have pro-

duced from your office records of monthly purchases of tape products from Minnesota Mining for stock purchases for the period of April 1953 through the month of November, 1953, have you not? A. I have. And we have
41 found by the evidence of the invoices that we purchased approximately $200.00 worth of pressure-sensitive tape during that period for stock.

Q. Your records show purchases during the month of April for stock purposes in what amount? A. $111.53.

Q. And in May? A. None.

Q. June? A. None.

Q. July? A. $65.43.

Q. In August? A. $18.00.

Q. In September? A. None.

Q. In October? A. None.

Q. November? A. None.

Deposition Testimony of Plaintiff's Witness—**Allen B. Cammack.**

(Page numbers at left refer to pages of deposition transcript.)

Cross Examination

By Mr. Tofeldt:

54 Q. How large a town is Burlington? A. About 30,000.

Q. Does it serve a farming community around it? A. It is more of a textile area.

Q. It has a larger trade area then than would any other normal city that size? A. It has more industrial business according to its size than you would find in a 28,000 location.

Q. Did I understand you correctly that you carried the Minnesota Mining line of tapes to October, 1953? A. That is my best recollection.

Q. You did not carry them afterwards? A. I carried what I had in stock; I bought no more after that.

Q. Did any Minnesota Mining representatives visit you after October, 1953 to the meeting in February, 1954? A. I think this Gensure boy came in, I was told that, that is my recollection.

Q. You gave him no orders though? A. Well, I was the one that ordered this particular product and if he came in my absence he didn't see anybody that would give him an order. We sent in orders, I believe.

Q. Did you send in any orders during that period, namely from October, 1953 to February, 1954? A. I don't have my orders with me and as to that I don't know.

Q. You have no recollection at all? A. I don't know, I have a file in my business that would answer that question.

Q. Did I understand you to say there were only two outlets in that business? A. Two retailers.

Q. Did I understand you correctly that at one time you were the only retail stationer in Burlington who handled Minnesota Mining products? A. That was my understanding when Mr. Davis was calling on me.

Q. And when later the other stationer began to handle Minnesota Mining? A. Well, he had Texcel during the

time and I had Minnesota Mining and later he began handling Minnesota Mining. He handled Minnesota Mining with his Texcel and I handled Texcel with my Minnesota Mining.

• • • • • • • • • •

57 Q. Did you aggressively push "Tuck" tape after
58 you started with them? A. Well, we sold it.

Q. Did you try to sell it to former users of "Scotch" brand tape? A. We did sell it to our customers.

Q. Did you try to sell it to them in preference to Minnesota Mining? A. We didn't have any other brands and we sold it.

Q. You had no other brand at that time? A. We had a few rolls of your company's tape.

Q. And you made no effort to replenish that tape? A. I don't know.

Q. But during that period from October, 1953 to February, 1954, you made no effort to replenish that supply? A. Well, I don't know whether we did or not. We sold what we had on our shelves and I don't recall if we did or did not re-order. I can tell by my records.

• • • • • • • • • •

59 Q. At any time subsequent to 1954 have you tried to get orders filled by Minnesota Mining? A. No, not when Gensure turned my orders back.

Q. Well, it is fact then that you do not know if Minnesota Mining would fill your orders? A. A salesman told me they wouldn't, he brought my order back.

Q. And you are relying entirely upon your salesman? But you have never tried since 1954 to get an order filled by Minnesota Mining? A. No, I have not tried.

• • • • • • • • • •

61 Q. Do you have an across-the-counter sales in your business? A. Yes.

Q. Did you at any time display "Scotch" tape in dispensers? A. Yes, I bought some "Scotch" tape dispensers from a jobber after that and we sold them and it is possible that we displayed "Tuck" cellophane tape in "Scotch" tape dispensers.

• • • • • • • • • • •

62 Q. But you don't deny that you might have displayed "Tuck" tape in "Scotch" tape dispensers? A. It could have happened, I certainly saw no reason for not doing it.

• • • • • • • • • • •

65 Q. Doesn't the Minnesota Mining & Manufacturing Company have sales meetings for its distributors? A. I never attended any, I don't know that they did.

• • • • • • • • • • •

66 Q. Did you ever attend any displays that Minnesota Mining might have had at one of your regional meetings? A. No.

Q. Were you invited? A. I presume so, if I ever attended the convention.

Excerpts from Plaintiff's Exhibit 145—Deposition Testimony of Plaintiff's Witness, **Seymour H. Rosenblatt**

(Page numbers at left refer to pages of the deposition transcript)

Direct Examination

By Mr. Kipnis:

• • • • • • • • • • •

7 Q. You learned that the City of Cleveland was in the market for cellophane tape; is that right? A. That is right.

Q. And then did you submit a bid or an offer to supply at that time? A. Yes.

Q. Whose brand of tape did you offer in that bid? A. This particular bid, we offered "Tuck" tape.

Q. And were you awarded a contract on that bid? A. We were awarded the contract.

Q. And then you filled the order? A. Yes. But it was returned to us.

Q. The tape was returned to you? A. That is right.

Q. You didn't say that at the time that you gave me the affidavit? A. No. We have since picked up the tape on it. That was because the dispensers were no good, wouldn't tear off. We have papers at Tuck Tape where we returned it for full credit.

• • • • • • • • • •

Cross Examination

By Mr. Hofeldt:

16 Q. I noticed that in your direct examination you said that the bid from the City was marked "Scotch Tape"? A. That is true.

Q. And you are positive of that? A. Yes; "Scotch" Tape.

Q. You have seen your original affidavit which is right there before you? A. Yes.

Q. On page 2 thereof, about six lines from the bottom,

it says, "Scotch Cellophane Tape." I will refer you to it. A. Yes; that is right.

Q. Which is the fact? Is it as you just testified or as it is there? A. That is true, because I called up the buyer there and he said, "It is 'Scotch'. That is the trade name identifying it, but we can accept anything equal."

• • • • • • • • • •

17 Q. Is it not a fact that they always say "Scotch Cellophane Tape"? A. Yes.

Q. Or its equal? A. No. Many times they don't put down "its equal."

Q. But they do at times put down "its equal"? A. Sometimes they might, but many times they don't. Are you talking about tape or other office supplies?

Q. Tape. A. Oh, yes.

• • • • • • • • • • •

20 Q. When did you first learn that there was a patent on Minnesota Mining transparent cellophane tape? A. When Mr. Howard told me.

Q. And about when was that? A. That was about,
21 oh, two weeks before the bid they were talking about.

Q. And between the time that he told you that and the time that you submitted your bid, you then knew that there was a patent involved at that date? A. Yes.

Q. But you submitted it anyway? A. Yes.

• • • • • • • • • •

24 Q. This telephone call to the Department of Justice, will you describe to me just what you did? A. I dialed the phone.

Q. You dialed the number? A. Without looking it up. I might be wrong. I think it is Cherry 1-7900.

Q. You didn't have to look it up at that time? A. No.

Q. How did you know about the Department of Justice, Anti-trust Division? A. Oh, that is real easy.

Q. I want to know. A. Because they have been coming to me a great deal regarding a pending inquiry against some stationers in Cleveland. We have been corresponding and telephoning.

Q. You were investigated in respect to that, too,
25 weren't you? A. Yes.

• • • • • • • • • •

Q. About when was this investigation with regard to the local stationers group indictment? A. Oh, the indictment, or whatever you want to call it—I don't even know that they have been indicted, but it was, approximately, I would say, within three months. April.

Q. About April of 1954? A. Yes; it has been going on for some time. I don't remember just when it started.

26 Q. The investigation started before April, 1954? A. I don't know. I don't know what the Justice Department does.

Q. Did they approach you before April of 1954? A. Oh, yes.

Q. They had approached you? A. Yes.

Q. At various times? A. Yes; at various times.

• • • • • • • • • •

27 Q. In regard to the complaint that you say that you made to the Department of Justice about the Minnesota Mining and Manufacturing Company as the result of these salesmen's conversation with you— A. Let me stop you right there. It wasn't a complaint. It was actually that I wanted to know if they had the right to come into my office and tell me that I can't handle another brand.

* * * * * * * * * * *

32 Q. You are familiar with the prevailing rates of discount enjoyed by distributors in Cleveland? A. I think so.

Q. What is the distributor's discount on Minnesota Mining and Manufacturing Company's tape, seventy-two rolls or more? A. What width?

Q. Various widths. A. The 1296 is forty.

Q. Forty per cent? A. Yes.

Q. What about 2592? A. I think about thirty-five.

Q. That is thirty-five per cent? A. Yes.

Q. What is the maximum discount allowed on a drop shipment on an order of 1152 rolls? A. I never drop shipped that many.

Q. You never have? A. No; not to my knowl-
33 edge. Eleven hundred and fifty two rolls?

Q. Yes. You never have? A. Wait a minute. I am just trying to think. That strikes me as a lot of orders. For me at least. Eleven hundred and fifty two rolls? There might have been once, but I can't recollect it now.

Q. That is a lot of tape, isn't it? A. That is a lot of tape.

Q. That is an awful lot of tape, isn't it? A. Yes; that is quite a bit of tape.

Q. You said that you did it once? A. I said that I might have done it once.

Q. Did you ever drop ship an order to a restaurant next door to your place? A. Yes.

Q. What was the purpose of that order? A. The purpose of that order was that she was going to use it in some kind of gift wrapping.

Q. Gift wrapping? A. Yes.

Q. What kind of establishment is that? A. That is a restaurant. Trucker's Haven Restaurant, she calls it.

Q. Who is she? A. Mrs. Charles.

34 Q. She was going to gift wrap 1152 rolls of tape? A. That is right.

Q. Wouldn't you get an additional seven and one-half per cent discount on such orders? A. Yes.

* * * * * * * * * *

Redirect Examination

By Mr. Kipnis:

37 A. Let me put it in a statement here of my own, if I may. May I or may I not?

Q. Surely. A. I have no qualms against your company or his company. I hold it more against the representative who came in and told me that. As you know, we have continued purchasing from the Minnesota Mining and Manufacturing Company. As a matter of fact, our sales have increased very greatly.

* * * * * * * * * *

Recross Examination

By Mr. Hofeldt:

. . . . . .

Q. Who carried on the bulk of this conversation with you? A. We talk with salesmen all the time.

Q. I mean when Messrs. Groth and Howard were in your office. A. Mainly Mr. Howard.

Q. Mainly Mr. Howard? A. Yes.

Q. Was Mr. Groth his superior? A. As far as I know, he is.

Q. He is in charge of the entire Cleveland area, isn't he? A. As far as I know he is.

Q. When you want to buy tape, whom do you call? A. Groth or Howard? You mean the one whom I call?

Q. That is right. A. I call for Harry Howard.

Q. As I understand, Mr. Howard was the one who carried on the conversation? A. Yes. I would say that he carried on the majority of it.

Q. Would you say ninety per cent of the conversation? A. I would say that Harry got very hot while he was talking to me, and I got pretty hot, and then Mr. Groth—

Q. At the time that—

Mr. Kipnis: Mr. Groth did what? A. Mr. Groth was more or less in the background.

Q. He didn't say anything? A. Oh, yes; he said a little, but Mr. Groth was more or less—when he saw that we were angry, he was more or less an appeaser at that moment

because the words were carried on mostly between Harry and myself.

Q. You mentioned that two weeks before this incident Mr. Howard was quite friendly with you? A. Yes. Up to that very time. On this deal, after they had left the office, I decided that we would continue carrying Minnesota Mining tape, but I didn't want—I called up Mr. Groth and told him that there was no need for Mr. Howard to call on us any longer.

. . . . . .

44 Q. Incidentally, you are still a jobber of Minnesota Mining and Manufacturing Company products? A. Yes.

Excerpts from Plaintiff's Exhibit 40

Deposition Testimony of Plaintiff's Witness—**Abraham Trachtenberg.**

(Page numbers at left refer to pages of deposition transcript.)

Cross Examination

By Mr. Kinney:

33 Q. Did you check your records with respect to any of your testimony that you gave here today, Mr. Trachtenberg? A. Yes, I have.

Q. Well now, I understand in your previous testimony that you said your first purchases from Minnesota Mining of pressure-sensitive tape were in the year 1952. Did I hear you incorrectly or was your answer incorrect? Do you want to modify that? A. To be 100 percent certain,

I would have to go back and check my records from the time we started in business, actually, because there is one thing I would like to point out, it might be well to have that show, I am only in the office a very small period of the time, and a lot of the purchasing is done by other members of the organization whom I have delegated that responsibility to, so it is possible purchases were made without my knowledge and which I would have no record of as an individual.

Q. What was the basis of your checking your records? What were you looking for when you checked your records to get ready for this testimony? A. The thing I was looking for in checking my records to get ready for this testimony was when we started to do business regularly with Minnesota Mining.

Q. Did you ever do business regularly with Minnesota Mining? A. Not to my knowledge.

Q. I understand you did check your records as to purchases of pressure-sensitive tape from Minnesota Mining by your partnership in 1952, is that right? A. Cor-
34 rect.

Q. Can you tell us what the total purchases were in the year 1952, and if you want to step in the next room and look at your records, why that is all right. A. (No response.)

Q. Or if that is too difficult—I see it is giving you some difficulty—if you can give us the approximate purchases. A. I will put it this way. I don't feel I have any right as an individual to disclose any records that our books may show, without consent of the other members of the concern and they are not available at the present time.

Q. Well, Mr. Trachtenberg, we have notice here that you are to testify today and you testified on direct examination about purchases from Minnesota Mining, about purchases of tape, and unless counsel for the opposing parties have some objection, I believe you ought to go ahead and answer those questions.

• • • • • • • • • •

Q. Yes. You have your record now of purchases of tape from Minnesota Mining? A. Yes.

35 Q. In what year? A. 1952 and 1953.

Q. Can you give us those purchases for 1952, total purchases? A. Total purchases?

• • • • • • • • • •

Q. Give us either the total purchases for 1952 or the individual purchases. A. Let me do it my way. November 21, 1952, $90.79. Strike that out. We will start right. November 12, $90.79.

Mr. Hamilton: 1952.

The Witness: Right. Paid November 21, $90.79. November 26, ditto. December 8, paid ditto.

Q. What was that amount? A. $90.79.

Q. The same amount of money? A. Yes.

Q. All right. A. December 1, $44.02. December 19, $90.79. That December 1st was paid on December 10, $44.02. Now, we go to December 19, $90.79.

Q. Is that all of it for 1952, now? A. Yes.

Q. So that would be somewhere in the neighborhood of $300 in purchases, or a little over that, or perhaps $310, something like that?

• • • • • • • • • •

Q. That is approximately right, isn't it? A. Yes.

Q. That is the total purchases for 1952. Do you know, as a matter of personal knowledge, that all of those items of $90 and some cents, were all for the same kind of tape? A. No, I do not.

Q. You don't know that? A. No, I don't.

Q. Do you know whether they were all for the same customer? A. No, I don't know that.

Q. Do you know who your main customer for Minnesota Mining tape was at that time? A. Not without checking the records.

Q. Might it have been some shoe company? A. Very possible.

Q. Does that refresh your recollection? A. Yes.

Q. What shoe company might it have been? A. Either —well, it could be either—wait, now, let me think. It will be either Mutual Shoe Company, Ware Shoe Company, or it might have been another.

Q. Now, in your direct testimony I understood you said that in your discussions with Minnesota Mining you had a new customer for tape that Minnesota Mining, that had never used Minnesota Mining tape previously? Was that the answer? That it meant new business? Did you mean it meant new business to Minnesota Mining or new business to Edwards Paper Company?

A. It meant new business to both of us.

Q. This customer you were talking about had never bought Minnesota Mining tape before? That was the sense of your answer, was it? A. You are saying that specifically we were referring to one customer.

Q. Were you referring to more than one? A. No, we were referring to more than one customer.

Q. One shoe company bought the bulk of Minnesota Mining products that you ever bought and resold, did it not? A. I think you are right.

Q. With respect to that company that bought the bulk of all your Minnesota Mining tape that you bought and resold, do I understand that your testimony is that that company had never used Minnesota Mining tape before? A. No, I didn't say that.

Q. You did not say that? A. I don't know if they had ever used Minnesota Mining tape before.

Q. So you don't know if that was an old account or a new one, as far as Minnesota Mining & Manufacturing Company was concerned? A. Correct.

Q. Do you know when your partnership first made any sale to the Ware Shoe Company, of any kind of product? A. 1946.

Q. 1946, and when did you first sell pressure-sensitive tape of anybody's manufacture to Ware Shoe Company, if you know?

38 A. I would have to check my files.

Q. I see. You don't know that as a matter of recollection? A. As a matter of recollection, no.

Q. Do you know as a matter of recollection whether it was before 1952? A. No, not without checking my files, and we have customer files that go back that far.

• • • • • • • • • •

40 Q. None at all. Now, 1953, what were your purchases? You can just list those. You don't

have to give us the date paid, if you don't want to. Just list the quantities of purchases and the reporter will tabulate them. A. January 16, $90.79. February 4, $181.58.

Q. Is that all for the year 1953? A. That is all for 1953.

• • • • • • • • • •

42 Q. Now, do you have there the list of your sales of "Scotch" brand No. 880 tape to Ware Shoe Company? A. 11-18-52, one case.

Q. Yes. A. Do you want me to go ahead?

43 Q. Go ahead with each of them.

• • • • • • • • • •

A. 11-26-52, one case. 12-19-52, one case. 1-16-53, one case. 2-4-53, two cases. Well, I doubt if there would be anything further than that because that's about when we—

Q. That aggregates all your purchases from Minnesota Mining except that purchase of $40 and some cents, doesn't it? A. How many did I give you?

The Reporter: Five.

The Witness: Right. The answer to my last question was right.

Q You don't know where that $40 worth of tape went to, do you? A. That may have also been to Ware Shoe for all I know.

• • • • • • • • • •

44 Q. Didn't you have the tape of another brand which would fill the spot that this No. 880 "Scotch" brand tape filled? A. No.

Q. There must have been a "Permacel" tape that would

match that, wasn't there? A. If there was, we aren't familiar with it.

Q. You weren't? Wasn't there a "Tuck" brand tape that matched that? A. No.

Q. There wasn't? A. No.

Q. Is that the reason why you wanted to buy the "Scotch" brand? A. One of the reasons.

• • • • • • • • • •

45 Q. You did not know they did not have a "Tuck" brand tape to match that? A. To my knowledge, at the time there wasn't any "Tuck" brand tape that would match that.

Q. Did the customer insist on the "Scotch" brand? A. I can't recall whether he insisted on the "Scotch" brand or not.

Q. But it was the only thing that you knew of that would fill the bill at Ware Shoe Company, is that right? A. (No response)

Q. Let me say, "fill the need at Ware Shoe Company". A. Let me answer it in this manner. The customer was interested in a certain type of tape for what we assumed a usage, of what we had no knowledge. He asked us about it. We were familiar with a tape that would do what he wanted it to do.

Q. And he knew that the "Scotch" Brand No. 880 would do what he wanted it to do, is that right? A. I assume he did.

• • • • • • • • • •

48 Q. Do I understand you do not recall whether they asked you to supply "Scotch" brand No. 880 tape,

or whether they simply stated a problem to you? A. In other words, you are saying did he say to me, "Do I want 'Scotch' brand 880 specifically"?

Q. No, I am saying, do you recall whether either of those two things happened? A. No, I don't.

• • • • • • • • • •

50 Q. Now, your sales of Technical Tape Corporation have been continuous since you first started selling that product? A. Yes.

51 Q. And that was, I think you said, in 1947? A. In 1947.

• • • • • • • • • •

Q. And you have been Technical Tape Corporation's active jobber in this area since you first started handling their tapes? A. We have.

Q. And these particular depositions are being taken at your office, are they not? They are.

52 Q. And you voluntarily agreed to appear here without any subpoena or anything, is that correct? A. I did.

Excerpts from Plaintiff's Exhibit 42

Deposition Testimony of Plaintiff's Witness—Albert S. Drew.

(Page numbers at left refer to pages of deposition transcript.)

Direct Examination

By Mr. Spille:

. . . . . .

4 Q. Does that mean you are in charge in New England of sales of pressure sensitive tape made by "3M" Company to wholesalers who are distributors, who are jobbers, whose customers in turn are plants and factories? Is that a fair statement? A. I think it is, yes sir.

Q. In other words, you do not supervise the sales of Minnesota tape to jobbers or customers who ultimately sell to small retail stores such as Woolworth's, or corner drug stores? A. No, I have very little to do with that.

Q. How many salesmen do you supervise, Mr. Drew, at the present time? A. Eight.

Q. Who is your supervisor? A. Mr. J. B., I think it is, Bennison, B-e-n-n-i-s-o-n.

Q. Where is Mr. Bennison located? A. He's located in our Ridgefield, New Jersey office.

Q. What is his title? A. Eastern Regional Sales Manager.

. . . . . .

6 Q. Are you in a policy-making position for Minnesota Mining & Manufacturing Company? A. No, sir.

Q. Do you carry out policy transmitted to you through the chain of command? A. To the best of my ability.

Q. And in that chain of command your immediate contact is Mr. Bennison? A. Right.

Q. And do you know who directs Mr. Bennison's activities, or supervises them? A. Recently they have
7 appointed a general sales manager in St. Paul, the home office. E. W. Decker.

* * * * * * * * *

13 Q. I see. Do you know what the Minnesota Mining policy is regarding distributors or jobbers in the industrial field? A. In a general way. There are quite a few conditions in there.

Q. Has the policy changed in any way in the last two years? A. There has been a slight—there has been a change, yes.

Q. Do you know what the change is? A. Yes, sir.

14 Q. Can you tell us? A. We now have a policy—

Mr. Kinney: Let me interpose this objection, Mr. Spille. I think you understand from what Mr. Drew has already said, he does not make policy.

Mr. Spille: No, I am simply examining him on his knowledge.

Mr. Kinney: If there is anything critical of what Minnesota Mining & Manufacturing Company's policy is, this witness is not the right one to get that information from.

Mr. Spille: I assume there is a possibility of that. I simply asked if he knew what the policy was.

Mr. Kinney: What his understanding was of the policy.

Mr. Spille: That is right, and we must take up later the question of how correct or authoritative his understanding may be.

Q. Can you tell us what that policy is, or what your version of it is? Let's take 1950 as a base year. What was the policy of Minnesota Mining & Manufacturing Company with regard to distributors and jobbers handling or about to handle pressure-sensitive adhesive tape? A. Well, they had to meet certain requirements. They had to have an office. I am reciting this from memory.

Q. Yes. A. They had to have a warehouse. They
15 had to have one salesman over and beyond the owner or manager, and, of course, always essential, being able to pay their bills. We also wanted to know what field of endeavor they were working in, that is, what class of customers they were calling on.

. . . . . .

Q. Referring back to this policy, as I understand it in 1950, a jobber in the industrial field for "3M" had to have a warehouse, an office, and at least one salesman besides the owner, and should pay his bills satisfactorily, is that correct? A. There were things over and be-
16 yond that.

Q. Can you tell me anything of significance? A. That's why I wondered if I had skipped it.

. . . . . .

17 Q. Are there any other factors in the selection of dealers or distributors or jobbers, as of 1950, other

than the ones you have just enumerated, which are of significance? A. The one I know of has been—on the books policy for a long time, that no jobber is to be put on our books as such to handle one consuming account only.

Q. One account. I see. Has the policy changed since 1950? A. In that respect?

Q. Yes. A. Not to my knowledge.

* * * * * * * *

53 Q. In 1952 had Minnesota's policy with regard to distributors changed in any way? A. No, sir.

Q. In 1953 had it changed in any way? A. No, sir.

Q. Is it the same today as it was in 1950? A. Yes, sir.

Q. I believe you told us previously that you have entered into agreements with certain distributors or jobbers to carry Minnesota tape exclusively; is that correct? A. Before answering that, I would like to know, if I may, Mr. Spille, just what is meant by the word "agreement".

Q. I suggest you ask your counsel. I dare not try to instruct you, Mr. Drew. A. I don't care to be instructed. I just don't want any danger of there being two different interpretations of the word "agreement".

Q. Suppose I ask you then if you have made any gentlemen's understandings or agreements with any jobbers or distributors to handle Minnesota tape exclusively? A. In this respect: That we have proposed certain things and they have or have not accepted them.

Q. What things have you proposed? A. We have proposed to certain distributors that we think are qualified that we furnish them with all the product knowledge
54 we have as salesmen; the facilities of our laboratory; the facilities of our customer engineering group, our

merchandising group, and our sales force, and to teach them as much as we can of what we know about the application of pressure-sensitive tapes; where the customers may be found or where they are likely to be found, according to application; to make them as good salesmen for our tapes as we think we ourselves are.

Q. These suggestions were made to jobbers and distributors in the industrial field to handle Minnesota pressure-sensitive tapes? A. That is right.

Q. When did you first make such proposals? A. Along in the middle of the summer of 1953.

Q. The middle of the summer of 1953? A. Yes, sir.

Q. Prior to that time, did Minnesota provide technical service and assistance to industrial jobbers and distributors handling Minnesota pressure-sensitive tapes? A. In a comparatively limited way.

Q. And now you propose to increase the amount of technical service available to such jobbers and distributors, is that correct? A. That is correct.

* * * * * * * * *

55 Q. On March 26, 1954, in response to my question regarding the policy of Minnesota in selling pressure sensitive tape to jobbers and distributors in the industrial field, and whether or not you expected them to sell only Minnesota tape, you answered:

"That policy does not apply to all jobbers."

Do you now want to change your answer?

Mr. Hamilton: Will you show the witness the question, please?

Mr. Spille: Certainly. I suggest that you read it from the beginning.

Q. Your answer was "That policy does not apply to all jobbers", and I now ask you, Mr. Drew, do you want to change that answer? A. I would like to say—

Q. Please give a yes or no answer on that one. Does that answer stand or do you want to modify it or change it in any way—yes or no—and then we will talk over what you want to change. A. You want a yes or no answer to what question?

Q. Do you now want to change that answer—yes or no? A. I would like to change my answer because I think—in fact, I know I did not understand your question when it was first asked.

Q. What do you answer in regard to that question?

A. We do not have a policy where we refuse to sell a distributor or a jobber because he is handling competitive tapes.

• • • • • • • • • •

66 Q. At the time you entered into these gentlemen's understandings, were you authorized to make such understandings on behalf of Minnesota? A. May I ask a question before I answer that? What is this understanding that we made?

(Discussion off the record)

• • • • • • • • • •

Testimony of **Ernest R. Hanson**, called as a witness by Technical.

(Record pages 3108 et seq.)

Direct Examination

By Mr. Morris:

3108 Q. You are a chemist aren't you? A. Yes, sir.

Q. Are you presently employed by Foster D. Snell, Inc? A. I am.

Q. Give me your educational background, will you, please. A. I have the standard school education; graduated from Fargo College with a B.S. degree and from Northwestern University with a Doctor of Philosophy degree.

. . . . . .

Cross Examination

By Mr. Haight:

3118 Q. These different bottles contain various ingredients. Here is one that contains 10 grams thin latex crepe. Now do you know the source of that latex crepe? It is plantation rubber, isn't it? A. That is right; obtained from a supplier in New York.

Q. What? About 95, 98 percent of our rubber is plantation rubber? A. Not any more.

Q. Well, leaving out the synthetics. A. I would say so, yes.

3119 Q. Well, did you ever find any resin in natural rubber? A. Yes, sir.

Q. In the plantation rubber did you ever find more than a very small percentage? A. No, sir.

Q. And the resin that you found was a fatty acid, not a tackifying resin like a rosin, is that correct? A. Yes.

Testimony of **Paul Shalita**, called as an adverse witness by Minnesota.

(Record pages 1061 et seq.)

Direct Examination

By Mr. Haight:

1061 Q. What is your occupation, Mr. Shalita? A. I am a chemist.

1062 Q. Where are you employed? A. Technical Tape Corporation.

Q. What is your position with Technical Tape? A. I am Technical Director and Vice-President.

• • • • • • • • • •

Q. Now you are saying you were a chemist. Did you graduate in chemistry? A. I did not.

Q. Prior to your coming with Technical Tape you had experience working on pressure-sensitive cellophane tapes, did you not? A. I did.

Q. And with what company was that? A. Metaplast Tape Corporation.

Q. Is that the only one? A. No. Prior to that, and actually at the same location, there was the Cofax Corporation.

Q. During what period did you work with Cofax? A. Well, during the entire existence of the Cofax Corporation, which I believe was from 1942 to 1945 or early 1946.

Q. And then how long were you with Metaplast? A. Until July or August of 1947.

• • • • • • • • • •

1063 Q. What were you doing there? A. I was chief chemist of the Metaplast Tape Corporation.

Q. And what products were you working on? A. Pressure-sensitive tapes on various backings.

Q. And you had worked on those products at Cofax, is that correct? A. That's right.

The Court: And in what capacity were you employed at Cofax?

The Witness: As chief chemist.

The Court: And then from 1947 to date you have been with Technical Tape?

The Witness: That's correct.

Q. What in general are your duties with Technical Tape? A. Well, as technical director I assume the responsibility of being in charge of the laboratory on the development of its products and the improvement of its existing products.

The Court: Would you excuse me a minute, Mr. Haight? You were chief chemist with the Cofax Corporation
1064 from 1942 to 1945. Could you give me a little bit of your background before 1942?

The Witness: Before 1942 I had very — I was employed, I think, just for about two months before that. Actually

with Cofax Corporation was my first real employment. I was at school.

The Court: Well, what is your education?

The Witness: I have several years of college at CCNY, and I left due to illness and I was not able to return.

The Court: You were what class in CCNY?

The Witness: I started the class of 1939.

The Court: Did you take chemistry at City College?

The Witness: Yes, sir.

The Court: How many years college did you have?

The Witness: Two years days and about three years in the evenings.

The Court: All right, Mr. Haight.

Q. Did you go to Technical Tape seeking employment or did they seek you out? A. I think it was more of a mutual contact. It had met Mr. Cohen when he was with
1065 Hygrade Food Products and I was doing some consulting for him on cheese wrappers at that time, and I was leaving Metaplast Tape Corporation, and Mr. Cohen asked me whether I would want to join him or enter the employ of Technical Tape Corporation and I agreed and did.

Q. And did he in that discussion tell you some of the plans that he had for Technical Tape? A. Yes.

Q. And did you discuss with him the possibility of your contributing to those plans in view of your experience at Cofax Corporation? A. Yes.

Q. And you at that time knew you were going to come to work on pressure-sensitive tape problems? A. I did.

Q. By the way, back in your early days with the Colfax Corporation, you had read the Drew patent in suit, hadn't you? A. I had during some time of my employment with the Cofax Corporation read it.

• • • • • • • • • • •

1067. The Court: And is it the fact that you had read the Drew Patent 2,177,627 within the three years prior to 1945?

The Witness: Oh, yes.

• • • • • • • • • • •

1068 Q. And you had then (1945 or 1946) made up tapes following the disclosure of the Drew patent in suit? A. Yes, relating to Example E.

• • • • • • • • • • •

1075 Q. Now Mr. Cohen identified three rolls of tape here as having an adhesive without any natural rubber in them; one of them was Exhibit G. Can you tell whether that adhesive has any natural rubber in it? A. It does not.

Q. He also testified I believe that Exhibit K had no natural rubber in it (handing). A. No. this one has natural rubber on it.

Q. And he also was wrong on Exhibit O, wasn't he (handing)? A. Yes.

Q. Now in making those determinations, you unwound a bit of the tape and smelled it, is that correct? A. Yes.

Q. You couldn't tell just by looking at the tape what the chemistry of the adhesive was, could you? A. By looking at it? No.

Q. Now we will go back to the first one I handed you there, that little one, which I believe is G. What are the

constituents of the adhesive used in that tape? A. Polyvinyl butyl ether.

Q. Well now, will you just tell us what that is,
1076 please. A. It is a polymer of a plastic — it is a plastic-like material; it is tacky and in its own self and in its degree of polymer or the structure that ultimately ends up in, it is tacky as a natural characteristic of the material itself.

• • • • • • • • • •

Q. Now, it is stretchy? A. Yes.

Q. It is rubbery? A. To an extent it is.

Q. And it is to some extent compressible, like rubber? A. Yes.

• • • • • • • • • • •

1077 Q. When you buy it in the solid form, what do you mix with it to form the adhesive? A. A lower molecular weight or a soft material chemically composed the same as the polyvinyl butyl ether. It is a lower molecular weight polyvinyl butyl ether.

Q. By the way, rubber, it is an organic polymer, isn't it? A. Yes.

Q. And rubber is a high molecular weight organic polymer? A. Yes.

• • • • • • • • • •

1078 Q. What you have termed synthetic rubber, what was that? Buna-S? A. Yes.

Q. That also is a high molecular weight polymer, isn't it? A. Yes.

Q. When you make an adhesive, then, for your transparent pressure-sensitive cellophane tape, if you are using

natural rubber you mix the natural rubber with a lower molecular weight resin or rosin, don't you? A. Well, the material you could mix with it can be lower molecular weight and it can be a rosin.

Q. And you have mixed lower molecular weight resin with natural rubber, haven't you? A. Yes.

Q. To produce an adhesive on a tape sold by Tech Tape? A. Yes.

Q. And that is the way in which you make the pressure-sensitive adhesive when you have natural rubber, is to mix the high molecular weight rubber with a lower mole-
1079 cular weight resin; that is correct, isn't it? A. Well, it is one way of doing it.

Q. And the way in which you described doing it is to use a high molecular weight natural rubber and some high molecular weight synthetic rubber and then add, and mix with that, a lower molecular weight resin? A. That is one way of doing that one.

Q. And you have done it that way? A. Yes.

• • • • • • • • • •

Q. Now, then, on that particular one I will withdraw that from the question and say that in the instances
1080 in which you mix your polymers yourself to produce a synthetic adhesive you take a high molecular weight and a low molecular weight and mix the two to get the proper balance of cohesion and adhesion? A. You will end up with, if properly compounded, a proper balance of cohesion and adhesion.

Q. And you have done that? A. Yes.

Q. And then sold the product? A. Yes.

Q. Now you can also buy the synthetic polymer, the polyvinyl ether, instead of in this rubbery form you can buy it in a liquid, can't you? A. Yes.

Q. Where it is mixed with something, diluted down? A. Yes.

Q. You have the same material except that it is diluted in the liquid form, is that correct? A. Well, it is not diluted; it is dissolved.

• • • • • • • • • • •

A. I don't think so, I think it is considered a solvent.

Q. All right. Now which way do you buy it when
1081 you make your synthetic adhesive tape? A. Most of the time, in solution.

The Court: Is it dissolved or is it suspended?

The Witness: No, it is a true solution, it is a clear viscous liquid.

Q. Now when you mix that high molecular weight material — by the way, what is it dissolved in? A. Toluene.

Q. Now, when you mix that with a low molecular weight polyvinyl ether, in what form is that low molecular weight? A. 100 percent solids.

Q. And in what form is it? A. A very viscous liquid.

Q. Molasses-like? A. Cold molasses.

1082 Q. Much like the consistency of the cumarone-indene resin, Defendant's Exhibit BB? This is as to consistency. This is a molasses-in-January in this bottle, I believe. A. The consistency approximately like that.

• • • • • • • • • • •

Redirect Examination

By Mr. Haight:

1112 Q. Well, do you agree with this — and I will read from United States Patent No. 2,549,921:

"Polymerization of vinyl alkyl ethers with aluminum hexa-hydrosulfate,"

the Mosley patent assigned and issued to Union Carbide & Carbon Corporation as assignee on April 24, 1951, and I read from column 1, page 1, line 1:

"This invention relates to the polymerization of vinyl alkyl ethers" —

we will pause there. That is a polyvinyl ether, isn't it?

1113 Vinyl alkyl ethers? A. Yes.

Q. And that is what we are talking about here? A. Yes.

• • • • • • • • • •

Q. I will start reading again. Page 1, column 1, line 1:

"This invention relates to the polymerization of vinyl alkyl ethers to form tough rubbery polymers of high molecular weight."

Now when you polymerize vinyl alkyl ethers or polyvinyl ethers you can form and do form tough rubbery polymers, don't you, of high molecular weight?

• • • • • • • • • •

1114 A. After reading the patent, you do form a tough rubbery polymer as defined by the patent, and I think that is found on page 1, column 2, line 41. The sentence is as follows:

"The isolated polymers are tough rubbery materials having considerable elastic extensibility on stretching."

Therefore it is rubbery when the patentee describes it as being tough and elastic.

By the Court:

Q. Well, is that the characteristic of polyvinyl ether that is used by Technical Tape? A. Yes.

Q. So that it is correct to say that polyvinyl ether
1114a does have a rubbery base? A. As the limit of the rubbery base is to the stretching of it.

Q. For whatever other purpose, it does have rubbery base, rubbery characteristics to that extent? A. To that extent only, yes, your Honor.

1115 Q. To what extent doesn't it have a rubbery base? A. Well, the rubber, for instance, on stretching, generally comes a hundred percent, springs all the way back. Most of the —

Q. How does the elasticity or springing back have any bearing upon the quality of a product for use as an adhesive? A. Well —

Q. Does it have any? A. Yes, it does. I am trying to think of a simple method of giving it to you. As one example, a material such as a vinyl ether has a considerable amount of tack in it. So that it, itself, is an adhesive, a complete pressure-sentitive adhesive of itself.

• • • • • • • • • •

1119 Q. Let us take in the range of combinations of EXBM and EXBC that you have used commercially, and in order to get our meaning clear would it be fair to characterize the EXBM as the base and the EXBC as the tackifier? A. I couldn't give that as the definite means as describing the two products.

1120 Q. Why did you put the EXBC in? A. To plasticize and soften the adhesive.

Q But not to add to its adhesive strength? A. Yes, it does add to its adhesive strength.

Q. And that can be illustrated if we were, instead of using 30 parts of EXBC to 100 parts of EXBM, we were to use 100 parts of each, we would get a somewhat stickier mass such as I now show you, wouldn't we? A. You could get it.

Q. Well, wouldn't you? A. Well, assuming that is a mixture of equal parts of EXBM and EXBC, the chances are you would get something similar to it.

Q. You would expect to, wouldn't you? A. Yes.

• • • • • • • • • •

1121 Q. Now, Mr. Shalita, I show you some rolls of tape in sets of three; one having been marked for identification as Defendant's Exhibit DDDD, one group has been marked as Defendant's Exhibit EEEE, and I will ask you if those are products of Technical Tape? A. They are.

Q. I will also ask you if they are not sold in substantially identical dispensers, each set of three? A. Yes.

Q. And they are packaged in boxes that are identical? A. Yes.

• • • • • • • • • •

1124 Q. Now I will ask you if it is not the fact — unless I got these mixed up — that the three rolls, Defendant's Exhibit DDDD for identification, have natural rubber in the adhesive and the three rolls in Defendant's Exhibit

EEEE for identification have all polyvinyl ether? A. Yes.

Q. And just by looking at those in their use they are all just alike, aren't they? A. No.

Q. Well, don't they look alike to the purchaser? A. To the purchaser, but you asked me the question.

Q. Well, you can tell the difference? A. By looking at it I can.

Q. And by smelling? A. And by smelling.

The Court: Well, is it only somebody with your background and extensive training in chemical engineering and in the manufacture of adhesives who would be able to recognize it?

The Witness: I think that is correct.

The Court: Mr. Cohen could not?

The Witness: Not as readily as I can.

1125 The Court: So it is fair to say that except to the highly specialized trained eye of a chief chemist there can be no distinction?

The Witness: That is correct.

• • • • • • • • • •

Q. You have some chemists working under you at Technical Tape? A. I do.

Q. And one of them is a man by the name of Beyer? A. He does not work under me directly.

Q. Well, is he under your supervision as technical 1126 director? A. Partly yes.

Q. And he has a master's degree in chemistry? A. I don't know.

Q. You do know that he had some years experience at Minnesota Mining, don't you? A. Yes.

Q. And before he left Minnesota Mining and came with Technical Tape you talked with him didn't you? A. Yes.

• • • • • • • • • •

1133 Q. And assuming that that is EXBM and assuming that Defendant's Exhibit HHHH is EXBC, if I add EXBC to the EXBM I increase the tack, don't I? A. It depends upon what percent you combine the two definitely. It is limited to that.

Q. Well, let us say I add about 30 percent. A. 30 percent?

Q. Yes. A. It possibly will increase the tack, Yes.

Q. Let us say that I add equal parts. A. It will increase it still more.

Plaintiff's witness, **Paul Shalita.**

(Record pages 3015 et seq.)

• • • • • • • • • •

3015 The Court: Just, Mr. Witness, since you are here principally because all of this testimony is to be of some aid to the Court —

The Witness: Yes.

The Court: —point out to me in the Hodgson patent where he talks about transparent adhesive.

3016 The Witness: That is the exception I was going to answer. It may or may not be transparent, the rubber and coal tar pitch.

The Court: He does not talk anywhere about it being transparent.

The Witness: He does not use the word "transparent", no.

The Court: He doees not described or ascribe that quality to the adhesive to be used?

The Witness: No.

The Court: And he was not looking for a transparent adhesive in his product?

The Witness: That is correct.

. . . . . .

Direct Examination

By Mr. Spille:

3189 Q. Does the plaintiff in this case manufacture and sell insulating tapes? A. Yes.

3190 Q. All right, sir. A. There are many types with many end uses. They may be used for a temporary holding operation on wires, for instance, before they are further processed, and they are of the type where a light tack may be used.

Then there are places where such tape itself is to be used as permanently bonding material, and you may have a more aggressive tackiness where it holds on tenaciously.

Then you have forms where you have no tack, and where you just wrap around another wire, or where another protective coating of the same may be put on.

So that an insulating tape can be of a non-adhesive nature and can be of a mildly pressure-sensitive adhesive

nature, or of a high tacky adhesive nature, depending upon the actual use of it, and they are wide and almost tailor-made for each specific application.

• • • • • • • • • •

3199 The Court: Mr. Shalita, could you use a para-cumarone resin where you would not obtain these undesirable results with relation to offsetting of the adhesibe on the other side of the backing?

The Witness: I hesitated for a moment for one reason, your Honor. It is not only a question of the cumarone resin but also the treatment that is given the rubber in that example.

There is a double breakdown latex crepe which tends to soften it and make the rubber more tacky and have less cohesive strength, so you have to couple the treatment of the rubber with the resin, and if the two are balanced properly, a non-offsetting adhesive can be made, but it has taken a considerable amount of work to try and achieve that.

And this is based on my own personal experience in the last few months, to get that balance where you do have a non-offsetting adhesive.

• • • • • • • • • •

Cross Examination

By Mr. Haight:

3204 Q. There would not be the slightest necessity of Hodgson having any flexible transparent sheet, would there?

• • • • • • • • • •

A. He mentions celluloid or pyroxylin, which is the same material as a sheet. He also states that the entire assembly

of his dental film mount should be thin, and thin sheets of cellulose nitrate, which is pyroxylin, are flexible.

Q. There is no necessity for flexibility, is there? A. He is specifying the material that he uses in the window, and if the material is thin it is flexible.

The Court: The question is, Mr. Shalita, not whether it is in fact flexible, but whether there is any need for flexibility. Is that your question, Mr. Haight?

Mr. Haight: That is my point.

The Witness: Hodgson does not specify not having flexibility as such, but he gives you the construction of
3205 the materials, and it becomes a flexible film.

Mr. Haight: I move to strike the last part. My question only was as to the necessity.

. . . . . .

Q. And there is no necessity for flexibility at all, is there? A. He does not mention here the necessity for flexibility in this patent.

Q. And as to the adhesive, he does not mention
3206 that that should be transparent, does he? A. No, he does not mention that the adhesive has to be transparent.

Q. And there would be no point in the adhesive being transparent, would there? A. Well, since he does not mention it I can't say whether it should or should not be transparent.

Q. Well, now, let us look at this little exhibit 218. The adhesive is in a portion that is masked off by the back anyway, isn't it? A. Yes.

Q. So you could not see through the portion where the adhesive contacted whether the adhesive is transparent or not, could you? A. No.

Q. Now you will recall next as to the adhesive, Hodgson does not say whether it is non-offsetting or not, does he? A. He mentions that the film, that is, the x-ray negative can be removed without injury to the x-ray negative itself, and if the adhesive transferred or offset there would be some effect on the negative.

Q. What would the effect be? A. There would be a marring of the surface by the having of a residue
3207 of adhesive on the negative.

Q. Well, couldn't you just take your finger and wipe that off? A. Possibly, although I don't know. I don't know what the nature of that adhesive is other than the fact that it can be made from a rubber-coal tar pitch combination, or else with an adhesive similar to the ones used on surgeon's tape.

• • • • • • • • • •

3211 Q. So that then it would be very possible to have an adhesive with sufficient tack to hold that little film in place without getting an adhesive of such aggressiveness that it would strip the emulsion off, wouldn't it? A. Yes, it would be possible to do that.

• • • • • • • • • •

3217 Q. Well, do you ordinarily, in your thinking, think of rubber as adhesive, just plain rubber? A. That is one of the best.

Q. Without anything with it? A. That is correct.

Q. In what form? A. As an adhesive rubber and that is

the wide sense of using rubber in that, though we will assume plantation rubber —

The Court: Answer the question. In what form do you conceive it as the best adhesive? Rubber in what form? That is the question.

The Witness: In many forms, your Honor, depending — I have to just limit it to the product, because we say rubber, we can't just say a piece of pale crepe alone. You have to count what has been done to it, whether it has been milled, what it has been dissolved in, how that is treated —

The Court: You made the statement that in your opinion rubber was the best adhesive. In what form is rubber
3218 the best adhesive, is the question that Mr. Haight asked of you. Best can only be one, and when you said it is the best you had something in mind. In what form of rubber is it the best adhesive?

The Witness: I don't have in mind in that respect as rubber; again I have to say as it comes, let us say, thin latex crepe. When I use the word rubber as being the best adhesive, I mean it is the basis — of using the base of natural rubber in some form, it becomes a very good adhesive, and I — the overall picture, it is one of the best; it goes into more types of adhesives than most other materials. I am using rubber in the broad sense, not just limiting it to a specific type of rubber.

Q. Do you mean rubber and some other ingredients, then? A. Rubber and some treatment of the rubber.

• • • • • • • • • •

3219 Q. Now I have here a roll of "Scotch" Cellophane Tape; I can leave that when I go away for two weeks for the holidays, and I get back, and in this little exposed

portion, exposed to the air, that is still tacky and adhesive, isn't it? A. I don't know that.

Q. Do you mean that with the commercial tapes made by both parties in this case that if a person leaves this in a dispenser for two weeks with a portion exposed, that portion will no longer be adhesive after two weeks? A. Definitely, depending upon where it is kept and how it is kept.

Q. Well. let us leave it on an office desk in the average office. A. It may or may not, depending on the dust, where sunlight hits it, or the like. You cannot make a broad statement that it will be good or whether it won't
3220 be good; you have to know the conditions under which it is kept.

Q. Let us first postulate that it is kept in an office, make it your office. A. That would be a very bad example; there is a considerable amount of dust in my office.

Q. Make it right in this courtroom. Is it your position that I couldn't leave this roll of tape here for two weeks, sitting right there on the bench right by you there, and have that adhesive when I come back in two weeks? A. You may not be able to. I cannot say whether it will or will not.

Q. I will now show you Defendant's Exhibit R, which was received in evidence on November 21, 1954. So far as I know, that hasn't been moved so far as the tape is concerned from that date to this. Do you expect that when that has been just kicking around in a box of exhibits and then finally, within the last day, put in orderly fashion in a file, do you think that the adhesive is destroyed in the little length between the roll and the point where it is cut? A. I have no way of knowing; I wouldn't hazard a guess, because that is all it would be.

3221 Q. But you think maybe there will be no adhesive there? A. No adhesive or else it may be (have) less tack than it had before; it is going to depend on how hard you are going to press it, can be pressed into service, whether you reactivate the adhesive surface or not.

Q. As a matter of fact, pressing just with my thumb I would be able to delaminate the printing on that patent in front of you, wouldn't I? A. Possibly you could.

• • • • • • • • • • •

3224 Q. Well, just plain latex in the solvent, is that an adhesive when all of the solvent is driven off? A. The thin films when coated on a material such as cellophane, cellulose acetate or the like, it is an adhesive.

Q. But not the slightest solvent in it? A. Without any solvent in it.

Q. And when it is thoroughly dried? A. When it is thoroughly dried.

Q. Yesterday you were asked—

The Court: So that latex before it has been put in a solvent is an adhesive?

The Witness: In thin films it is, your Honor, yes.
3224a We can't take a block of rubber and say that this is an adhesive, because it has been handled, dust and the like, and we take it and dissolve it in the solvent and then—

3225 The Court: No. Not dissolving the thing, but take that piece of latex and shave off every part that has ever been exposed to any dust or light or sun, any deteriorating material or exposure, would that, in its then condition, be an adhesive?

The Witness: Yes, it would, your Honor.

Q. And a pressure-sensitive adhesive? A. Yes, it would be mildly pressure-sensitive.

Q. And that is what you have meant by testimony here when you have used the phrase "mildly pressure-sensitive"? A. I have used it for that and I have used it for rubber, straight rubber solution, which was made of a milled rubber.

The Court: When you say that that latex in its original condition is adhesive, do you mean it can be used commercially as an adhesive?

The Witness: Yes. Your Honor, if I may—

The Court: It can or it can't?

The Witness: Yes, it can.

The Court: In its then condition and without dissoloving it, in its condition as I described it, without doing more to it at all, it is an adhesive?

3226 Why do you hesitate to answer? That was the question I meant to put to you before but apparently I didn't convey that to you.

The Winess: I thought you said the rubber as it originally comes.

The Court: From the tree?

The Witness: Yes. And then it is different. That is latex. You mentioned latex. Latex crepe we have been talking about.

The Court: Yes. The latex crepe, after you shave off every surface that has been exposed so that you don't have any deteriorating effects insofar as adhesiveness is con-

cerned because of dust or sun or anything like that; what would you have left? Would that be an adhesive?

The Witness: Your Honor, you probably define as the base for forming an adhesive as—

The Court: It isn't an adhesive.

The Witness: No, not in the lump form. I can't picture it as being an adhesive in a lump form.

The Court: Not in the lump form, but shave it down to .010 of an inch, would be an adhesive?

The Witness: Yes, where it is thin and where you have the characteristics that rubber has, and where it
3227 would be flexible at that point, it was thin, and you have shaved off the areas so that there is no dust and dirt, it has tack characteristics at that point and in—

The Court: .010 of an inch, it would be an adhesive?

The Witness: Yes.

The Court: Commercial adhesive?

The Witness: For certain applications it would be, yes, if you could supply it in the film of that thickness of .010 of an inch, you would save the difficulty of coating it with a solution. You have the adhesive already in a form which would be a sheet of rubber of .010 of an inch thick. At that stage it would be an adhesive.

The Court: And that is the adhesive?

The Witness: Yes, that is basically the adhesive.

• • • • • • • • • • •

3229 Q. Now Mantell specified a different purpose for using Holland cloth, didn't he? A. He specified it as a protection for the adhesive.

Q. In the same way and for the same purpose that you use it in a regular electrical rubber tape? A. No. I think in the rubber tape I mentioned I was just describing
3230 what Holland cloth was and the fact that it was used as a barrier or separator for materials that are either highly adhesive or highly cohesive. That is what I tried to explain yesterday. I was just giving a background of Holland cloth and one of its uses.

Q. And what is the use that Mantell mentions for it? A. As a protection for his adhesive which is coated on—cellophane is one of the examples of the backing.

Q. What does he want to protect it from? A. Drying out.

Q. Why does he want to protect his adhesive from drying out? A. Because otherwise he would defeat the purpose of having it adhere to a photograph for retouching and using material. His shading —

Q. Why would that defeat the purpose? A. It would not adhere to the photograph that he wants to retouch.

• • • • • • • • • • •

3231 Q. In the Drew patent in suit, instead of providing a liner so as to preserve the solvent, Drew gives specific directions to drive off the solvent, doesn't he?

• • • • • • • • • • •

A. Drew is referring to a tape and he gives the method of driving off the solvent. However, since his is a continuous operation, there is no need for a liner to be put in or a material to prevent the adhesive from drying out. It is rolled up on its own backing, and that protects it from drying out.

• • • • • • • • • • •

The Court: Well, does Drew give instructions for drying out the solvent?

The Witness: Yes. In my answer I stated that, your Honor.

The Court: He does?

The Witness: Yes, sir.

3232 Q. And he mentions the complete removal of solvent, doesn't he? I refer you to page 5, column 2, and it is down toward the end of that paragraph, somewhere around about line 55. A. He is talking about the primer in driving out the solvent completely at that point.

Q. Oh, he is? Well, then, let us back up a little bit. Let us back up to line 43, and we will put on the primer and we will get down to the adhesive, and I think we dry it.

"A uniform layer of primer is applied at this point to the film or web of backing material. The web thus prepared travels from the squeeze rolls, to a duct for removing and drying off the solvents in the primer."

Now we have got the solvent out of the primer. A. Right.

Q. And I am going to continue:

"The web then is directed to a contrivance for coating, at which point a doctor knife or coating knife is used to spread a film of the composition of adhesive material. The composition is directly applied over the primer and the composite as coated is either hung in festoons or
3233 travels through a drying duct, at which point sufficient time is allowed for complete removal of the solvent . . ."

That is complete removal of the solvent and the adhesive, isn't it? A. That's correct.

• • • • • • • • • •

3242 Q. Well, let us take it step by step then. Relatively speaking, parchmentized paper has a rough surface, doesn't it? A. Relative to cellophane.

Q. And when you look at it under the microscope, as you say you have done, you see undulations and little hills and irregular hills, don't you? A. Yes; I think I have so testified.

• • • • • • • • • •

3244 Q. Have you ever looked at cellophane under a microscope? A. Yes.

Q. That is just a clear glass, isn't it? A. It is clear cellophane.

Q. But it looks just like clear glass, smooth, plain surface? A. Yes, it has a smooth surface.

Q. As compared with what under a microscope looks like a very rough surface of parchment? A. Under a microscope parchment paper looks rough because of the nature of the material.

• • • • • • • • • •

3245 Q. In your cellophane you agree there that you
3246 have the same surface and the same problems on both sides, both the side the adhesive is on and the back side which it will contact with, wound in a roll; correct? A. Yes.

• • • • • • • • • •

3247 Q. I show you Plaintiff's Exhibit 1 and ask you what is that? A. It is "Tuck" masking tape.

Q. Now I have stripped off a piece of that and I will ask you to look at it in the light and see if you don't see a sheen on the spots where that has contacted the high spots on the back. A. Mr. Haight, I think the sheen is due to the portion of adhesive that is not in contact with the backing, and as I was describing before, you have a certain amount of plastic flow to the adhesive and if you were to

take an adhesive of this nature and just hang it up and let it stand for a period of time, the entire surface will become glossy. The dullness is the portion that is in contact with the underlying layer, the gloss is the portion that is not in contact with the underlying layer.

Q. That is the gloss is the depressions in this? A. Yes. (To Court) They are faint.

3248 Q. The little glossy spots were not in contact but the dull spots were; is that it? A. That is correct.

• • • • • • • • • •

3266 Q. Now the Austrian Kronstein patent, Exhibit 158-T, do you have a copy of that in front of you? A. 158-T, yes, I have a copy of that in front of me.

Q. Now do you notice that in the first paragraph of that patent it states what had been used as insulating materials, electrical insulating materials? A. It lists some of them.

• • • • • • • • • •

3267 Q. Now I ask you, you are familiar with an electrical insulating material that has got a dry solid layer on the outside, aren't you? A. Yes; there are many insulating materials that have that.

Q. And an example of that is varnished cambric that you mentioned this morning, isn't it? A. Yes.

• • • • • • • • • •

3268 Q. Have you ever seen them make varnished cambric? A. Yes.

Q. And would you describe, briefly, how it is made? A. One form that I saw made was where the cloth would go through successive baths of a varnish into a drying tow-

er, the solvent would be evaporated and the varnish cured. This can be done in one or many passes through a
3269 bath, depending on the amount of varnish that is desired to be coated on the cloth itself.

• • • • • • • • • • •

Q. Now we will continue with the Kronstein patent. Do you believe, by the way, that that is what he is referring to in the first paragraph, something of that order? A. Only partly, because he is also referring to a rubber-treated cloth.

3270 Q. The rubber-treated cloth that he is speaking of will have a dry surface, won't it? A. In that paragraph I think he limits to a—well, his last five words of that paragraph "dry solid layer this way."

Q. So that the rubber would not be an adhesive in that instance? A. In that particular instance, I don't think so.

• • • • • • • • • • •

Q. The next paragraph, which is two short sentences. A. It relates to the varnish and the under base material.

Q. To produce a product such as Defendant's Exhibit C-5 for identification? A. To possibly produce something that would have the appearance of that exhibit.

Q. And the feel of it? A. That I don't know.

Q. Well, in any event, it would not be adhesive, would it?

3271 A. If it were limited to the paragraph above, it is not adhesive.

• • • • • • • • • • •

3274 The Court: Do you think that that is what Mr. Kronstein is attempting to indicate in his first full

paragraph on page 2, that he is attempting to indicate to you some new types of insulating substances that he did not have in mind in the first paragraph on page 1?

The Witness: I think he is introducing some additional ones.

The Court: That he did not have in mind on page 1, as you read the first paragraph of page 1?

The Witness: It is possible that he is including this larger list of materials on page 2 to cover the additional ones that were known that he had mentioned on page 1.

The Court: By general terms?

The Witness: By general terms.

3275 The Court: And that therefore he is not introducing anything new, necessarily, is he, insofar as insulating substances are concerned?

The Witness: Well, it is possible he is not introducing anything new.

The Court: Insofar as insulating substances are concerned.

The Witness: As the insulating substance itself is concerned, yes.

• • • • • • • • • •

Q. I will continue reading:

3276 "The lack of susceptibility of the combined product against high temperatures creates the possibility to perform the unification of the cellulose material with the varnish even under higher temperatures without impairing the flexibility or power of resistance of the final product."

Now that does that mean to you? A. I think all he

means there is that he can run the tower at a higher temperature in coating the insulating material on the cellophane.

Q. All right. Now did you notice in the next paragraph that the product, according to the processing method of the invention, is furthermore absolutely oilproof? A. He mentions that it is absolutely oilproof on page 3.

* * * * * * * * * *

3277 Q. All right. So if we then have one of his materials that he talked about in the first two pages of the patent in which he had a rubber coating on his cellophane, what kind of rubber would that be and what kind of treatment would it have to have, necessarily to be oilproof? A. I don't think rubber itself ever becomes oilproof.

Q. Well, if you were going to coat, as Kronstein says he does, some cellophane with a rubber solution, and then run it into the tower and heat it up and finally produce a product, and you were going to try to get as close to oilproofness as you could on your rubber coating, what would you do to the rubber?

* * * * * * * * * *

3278 A. I would have to compound them in some form to make it as oilproof as possible.

Q. What forms do you know? A. I personally know?

Q. Yes. A. I would try and add oilproof plasticizers to it and possibly vulcanize it.

Q. You would certainly think of vulcanizing, wouldn't you? A. Yes.

Q. Now without going further into the patent, at that point the rubber that, let us say, is vulcanized on this Kron-

stein article with the cellophane core, that would not be an adhesive, would it, not yet? A. As such, no. But it is only one of many things disclosed.

3279 Q. Now, then, when we get down to the last paragraph on page 3, we then, for the first time, get anything, even a suggestion, of adhesive; isn't that correct? A. That is the first mention of it in this patent.

Q. Now did you see anything in the Kronstein patent saying anything about the use of a liner? A. No, I don't see any mention of a liner.

Q. By the way, on oilproofness, linoxyn or an oxidized linseed oil varnish, that is oilproof, isn't it? A. Yes.

Q. Is zapon varnish or lacquer oilproof? A. Generally speaking, nitrocellulose materials are oilproof.

Q. And cellulose acetate is oilproof? A. Generally speaking that is oilproof.

Q. And glue is, too, isn't it? A. Glue is, yes.

. . . . . .

3281 Q. Now I would like to ask you first about Brandenberger, and I want to take it sentence by sentence. I want the first sentence to which you refer to find an adhesive in Brandenberger. A. In the second paragraph where it says that the cellulose sheets can be coated with one or several layers of linseed oil, with a rubber solution. The rubber solution is the first adhesive mentioned. The second place where it says "with any insulating varnish." Insulating varnishes are adhesive. ". . . or with a mixture of these substances." And many mixtures of these substances are adhesive.

3282 Q. At that point he does not call them an adhesive, though, does he? A. No, but some of them are, just from the terminology of the materials as he uses it there.

Q. Now, linseed oil. Do you consider that an adhesive? A. Under certain conditions it may be an adhesive.

• • • • • • • • • •

3284 Q. Well, let us assume that what you want to do is to obtain a good insulating material that will be as impervious to electricity as we can get it, using only linseed oil now and cellophane. A. One form would be to coat the linseed oil on one side of the cellophane. It also can be dipped. However, when you are dipping it you get the linseed oil on both sides.

• • • • • • • • • •

3286 Q. And that is the product we get when we dip this cellophane in linseed oil and then pull it up on the tower, allowing it to immediately run down and oxidizing it, which will represent an article having a hard, smooth, electrical-resistant surface, won't it? A. It may have a smooth, electrical-resistant surface, but I don't know whether it will be hard.

• • • • • • • • • •

3287 Q. All right. Now let us take the insulating
3288 varnish. You could produce an article without that and which would be non-tacky too, couldn't you? A. With the insulating varnish alone you could produce either a tacky material or a non-tacky material.

• • • • • • • • • •

3293 Q. And the fact is you could use linseed oil alone with nothing else as an insulating varnish, could you? A. Linseed oil alone?

Q. Yes. A. I don't know. One of my references that I have looked up, oh, back approximately in 1900, tells of some disasters that can occur when using linseed oil alone.

Q. Well, does that mean that you can't use it? A. No, but this refers to the linseed oil when using it alone.

3294 Q. And Brandenberger says you may use it alone, isn't that correct? A. Depending upon the properties that you want to get you can use it alone.

Q. Now, Mr. Shalita, I will produce a roll from which strip marked Defendant's Exhibit C-5 for identification was taken, and I will take off the outside strip. I have now unwound at least one complete wind, and I will ask you to tear off the part I have unwound and we will discard that. A. All right.

Q. Now, will you take off a strip for yourself so that you are the only person to have handled it.

• • • • • • • • • •

3295 Q. Now, do you have this strip before you now? A. Yes.

Q. Now tear that off. (Witness does as requested.)

Q. Now peel that surface off. (Witness does as requested.)

Q. Do you find any tack? A. Very slight.

Q. All right. Will you produce your glass plate, please. A. I have the glass plpate.

Q. All right. And now I want you to press this strip of cambric just any way you want, and see if it will lift the glass plate. A. No, it will not.

3296 Q. There is not the slightest semblance of adhesion, is there? A. Not in this case, no.

* * * * * * * * * *

Q. Now, Mr. Shalita, are we in agreement that you could produce an electrical insulating material using cellophane instead of cambric, and using either linseed oil or a rubber solution, or an insulating varnish, and ending up with an article having a perfectly smooth and non-tacky surface that won't lift the glass plate which you brought to court? A. There are enough materials, and taking these materials, certain portions or combinations and the like, you can make a product, similar to this one.

Q. Now, you say there are a number of products? A. Yes.

Q. How many are embraced in the term linseed oil? A. One.

* * * * * * * * * *

3297 Q. Now, how many different rubber solutions are there? A. Depending on the rubber and its source. There are many different solutions of rubber.

Q. Well, dozens or hundreds? A. I don't think I would take it up as high as hundreds and possibly dozens either.

Q. All right. A. Let us take it down to about one dozen.

Q. Now, how many insulating varnishes were there back in Brandenberger's time? A. There were several.

3298 Q. Well, a dozen, two dozen? A. I don't know. There were several. I don't know how many.

Q. All right. A. And they were tailored for each specific application.

Q. Now, the next patent says, "or with a mixture of the substances." A. Yes.

Q. And to produce a coated cellophane that would be smooth and untacky such as on Exhibit C-5, is that correct? A. The possibility is there.

Q. Oh, you are not sure of that one? A. I haven't done it.

* * * * * * * * * *

3299 Q. Isn't this representative varnished cambric of the types you have seen? A. One form of the types of varnish, or it appears to be one type or form of the varnishes I have seen.

* * * * * * * * * *

3300 The Court: Well, as I understand it, the witness practically said he does not know. As a matter of fact, you don't know much about varnishes at all, do you?

The Witness: I know a bit about varnishes.

The Court: All you have done is a little bit of reading in preparation for this case?

The Witness: No, I have also done some work on varnishes, not only in preparation for this case, but I have done work on varnishes over the years.

The Court: Would you dignify yourself as being a varnish expert?

The Witness: A varnish expert?

The Court: Yes.

The Witness: No.

The Court: I have been construing a lot of your answers here as not knowing because you do not have enough experience.

The Witness: I wish you would point out where, your Honor, because I would like to know.

The Court: I could tell you if I were to examine the record, but time and again your answers indicated to me that you just did not know.

• • • • • • • • • • •

3301 Q. Then the next paragraph:

> "In order to reach the closure of the pores we can also bond together two or more sheets of cellulose; since the location of the pores will not coincide in the various sheets, we obtain an absolutely homogeneous surface."

And turning to page 2:

> "The sheets can be bonded by means of any adhesive substance."

I pause there and ask you: That is the first use of the word "adhesive" in the patent, isn't it? A. The first place where the word "adhesive" is so spelled out is at that point.

Q. The patent continues:

> "but, in order to increase their electrical resistance, they can be coated first with linseed oil, a solution of rubber or any insulating varnish. These coatings or varnishes can themselves serve as adhesives."

Now, pausing there, is there any disclosure of "adhesives" beyond that point in the patent? A. Without using
3302 the word—well, the word "adhesive" does not appear in the next paragraph. I have not looked at the summary yet. The actual word does not appear after that. However, in the second paragraph of that page, the last sentence:

> "The sheets thus obtained can be used as such as an insulating material or they can be bonded to each other and coated like sheets of pure cellulose."

Now, looking back, he has coated what is the pure cellulose, as he describes on page 1, with one or several layers of linseed oil, with a rubber solution, with any insulating varnish or with a mixture of these substances.

Q. All right, then we will come back up to the paragraph at the top of page 2 and I ask you what does the patent attribute the capacity for being an adhesive to? Now, it names certain adhesives, and what are they? A. It says that the linseed oil, the solution of rubber, or the in-
3303 sulating varnish can themselves serve as adhesives.

Q. And that is all that the patent says, "can serve as adhesives," isn't it. A. No. I think he said that the sheets can be bonded by means of any adhesive substance.

Q. So, then, the patent says you can have either linseed oil, a solution of rubber, insulating varnish, or any adhesive? Is that your understanding? A. Of that paragraph.

Q. All right. Now is there any other place in the patent where the patentee gives the name adhesive to any substance? A. He does not write out the word adhesive, but he describes an adhesive when he says a rubber solution.

Q. Well, I thought you told me that that might or might not be an adhesive. A. Only if it is given certain treatment will it not be an adhesive. We were talking before of vulcanizing it.

Q. Well, then, if it is given another treatment it can be a solvent-activated adhesive? A. Yes, the same as pressure-sensitive tape can also be a solvent-activated adhesive by using a solvent and activating the adhesive sur-
3304 face.

Q. That is by using a solvent-activated adhesive instead of a normally tacky, pressure-sensitive one, is that

right? A. The pressure-sensitive adhesive can be used as a solvent-activated one.

Q. Now, that may be, but my question is can I have with a rubber solution—first I can so compound it that I don't end up with an adhesive at all, isn't that right? Do you agree with me on that? A. Yes, it can be so compounded.

Q. All right. Next I can so start and use rubber or rubber solution and end up with a solvent-activated adhesive? A. That is another form.

Q. All right. Next I can start out with a rubber solution and don't compound it with anything and end up with a normally tacky and pressure-sensitive adhesive? A. That is still another form.

The Court: In what form did Brandenberger disclose that rubber solution in this patent as you read it?

The Witness: I think his rubber solution was an adhesive because he mentions—

3305 The Court: No, in what form does he disclose it?

The Witness: What form?

The Court: Yes. You say there were three forms, and I am asking you in what form did Mr. Brandenberger disclose it in his patent.

The Witness: I believe he discloses the rubber solution in the patent as a solution of natural rubber in a solvent.

The Court: And a pressure-sensitive adhesive? Well, first, do you read the words "rubber solution" in his disclosure as an adhesive?

The Witness: Yes.

The Court: Do you read that as a disclosure of a pressure-sensitive adhesive?

The Witness: The rubber solution as defined—

The Court: No, as used in this patent, not in the abstract sense, but as disclosed by Mr. Brandenberger as you construe it.

The Witness: Yes, I do, because—

The Court: And as a pressure-sensitive adhesive?

The Witness: Because it is used for wrapping around wires and cables and has to hold, and I feel that he has given you enough material here to make many types of insulating tapes from this type, too, as pressure-sensi-
3306 tive.

The Court: You come to that conclusion because the words "rubber solution" are there?

The Witness: Plus the insulating varnish, plus the mixture of these materials, which gives many types. Also, this particular product, varnished cambric, is also sold with pressure-sensitive adhesive on it I know personally for at least—well, at least 10 or 12 years.

The Court: All right.

* * * * * * * * * *

3308 Q. Now you pressed the friction tape on the glass plate. You have rolled it about four or five times, haven't you? A. Yes.

Q. Rubbing with the heel of your hand. Now try and lift the plate. It didn't lift it, did it? A. No, it just had a slight grab on it.

Q. It just jiggled it as you tore it off; isn't that correct? A. Yes.

Q. Now what are you doing? A. I would like to try it with another piece.

3309 Q. All right. A. It is difficult to get good adhesion to the glass or attempt to get it because I have adhesive on both sides, and as I press it down it is tending to adhere to my hand as well as to the glass plate, and there is a force being exerted to strip it as I am trying to apply it.

Q. Why don't we get a little sheet of paper off this tape underneath and put it on the top of the tape so that you will have a tape that will add the weight of the paper to the experiment. A. I was just looking for an open one of these cellophanes.

Q. Now you have laid the strip of friction tape on the glass. You have now taken a little strip of cellophane which you are laying on top of the tape, is that right? A. That's correct.

Q. Now you are going to press down on the cellophane so that you don't pull the tape off as you rub on the back side; is that correct? A. Right.

Q. And you didn't lift the plate, did you? A. No, I just moved it slightly.

• • • • • • • • • •

3312 Q. Now next I want you to tell me each instance in which Brandenberger suggests that anything be attached with an adhesive to anything else.

• • • • • • • • • •

3313 A. He is reading the first paragraph:

"The invention relates to an insulating substance destined primarily for cables or wires".

I think that he is attaching his insulating material in some form to the cable or wires.

Q. So that to you is the first reference for attaching something to something else? A. That's right.

Q. Now what is the second? A. The second reference of an attaching or adhering one material to another is in the third paragraph. He states:

"In order to reach the closure of the pores we can also bond together two or more sheets. . ."

Therefore he is adhering together two or more sheets.

Q. All right. That is the third one? A. The third one is the top of page 2, where he states:

3314 "The sheets can be bonded by means of any adhesive substance . . ."

Q. All right. Is there any other?

The Court: Two and three are the same, aren't they?

The Witness: Yes; on the second and third instance, your Honor?

The Court: Yes.

The Witness: Yes. It is relating to the same lamination or bonding two or more sheets.

A. Yes, I think in the next paragraph he is talking about the sheets that he surface treats, and he mentions that they can also be bonded to each other to form this insulating material.

Q. And that is like two and three again? A. Not quite, because he mentions also here that these bonded sheets can now be treated as if they were sheets of pure cellulose, which he had not mentioned above.

Q. All right. Now what is the next instance of adhering one thing to another?

Mr. Morris: By means of an adhesion, you mean? That is the same question, is it, that you have been asking?

3315 Mr. Haight: Yes.

A. I think the summary under "1" starts off the

same as the first instance I have given, where he was using the insulating material for pieces, wires, or cables; therefore he is going to attach them, hold them in some form, to the pieces to act as the insulator.

Q. All right. Are there any others? A. Yes. He says these sheets of cellulose are being used either as single sheets or after bonding several sheets together.

Q. That is in the first paragraph of the summary? A. Yes.

Q. Now that is the sixth. Are there any more? A. I think the next instance, after he has bonded sheets together, they may have an exterior coating which would appear in the last paragraph before the summary. Therefore—this coating can be of linseed oil or rubber solution or any insulating varnish, so that after the—the bonded sheets now have a coating on which can make them adhesive.

Q. Are there any others? A. Well, I think all of those that were found under the summary would hold true for No. 2, except substituting a surface-treated cellophane.

* * * * * * * * * *

3316 The Court: Let me ask you a question. How many categories do these adhesives discussed in this patent fall into? I want to make sure that I understand your construction, and as I understand it there are two, perhaps, three, classifications. One is the bonding or the union between this insulating material, this insulating product that Brandenberger discloses, to the article which is to be insulated.

The Witness: Yes.

The Court: Now that is one general classification, and you mentioned that several times.

The Witness: Yes, sir.

The Court: And then the second adhesive is where, in order to increase the insulating effect of the cellophane which he proposes to use, he says, why, you might bond the paper, so instead of taking one sheet, take two sheets, and you can bond those together with an adhesive.

The Witness: Yes.

The Court: So that is the second bonding.

The Witness: Yes.

3317 The Court: And, then, you have mentioned that several times because it appeared several times in the patent.

The Witness: Yes.

The Court: Now perhaps there is also a third one, and that is where a coating of insulating material is bonded on the sheet of cellophane.

The Witness: Yes, and particularly after the sheet has been laminated to each other, you can put an exterior coating of a material on it which can make as the adhesive, so we have a laminate and an exterior insulating material.

The Court: Are you saying anything different than I said? Because I want to make sure I follow you.

The Witness: No, I think the only difference was that I said bonded, two sheets were bonded, because I think the third one would almost be a repetition of the first, because we were taking the single sheet generally as in the first one.

• • • • • • • • • •

3355 Q. Mr. Shalita, will you refer to the French Brandenberger patent No. 433,999, Exhibit 202-T. Yesterday afternoon you mentioned several different in-

stances — I believe it was seven instances — in that patent where you found a statement that one article was adhered to another, or one thing was adhered to another. Now the first one was in the first two lines of the body of the patent:

> "The invention relates to an insulating substance destined primarily for cables or wires."

Now what is the statement there about what is adhered to what? A. The insulating substance is adhered to the cable or wire.

3356 Q. Now, is it necessarily adhered with an adhesive? A. It is adhered in some form. It may be an adhesive.

Q. It might be an adhesive? A. Yes, it can be an adhesive.

Q. And it also could be without an adhesive? A. Another form could be without an adhesive.

• • • • • • • • • •

3357 The Witness: It (Brandenberger) discloses an insulating substance to be used for cables and wires.

The Court: Does it say anything about being held with an adhesive?

The Witness: Not in that sense, your Honor.

The Court: So the patent does not disclose that the insulating material is held to, or bonded, or in any way affixed or adhered to the material or product to be insulated by any adhesive?

The Witness: No, not in that sense, your Honor.

• • • • • • • • • •

3360 Q. And where does the patent state that you then bond the article you have just described to anything else with an adhesive? Now I don't want it by inference, I want the clear sentence. A. The clear sentence of bond-

ing the finished article to another material is not given in so many words. However, you have the construction there with the adhesive on it and the use of it is for insulating purposes. So you have a material which can bond to other surfaces.

• • • • • • • • • • •

3362 Q. Now the only express statement in the patent, then, that one thing is to be secured to another by an adhesive, the patent refers to bonding two sheets of cellophane together; that is correct, isn't it? A. That is where he uses the word "bonding" and "adhesive".

Q. All right. Now in that instance does he suggest anywhere that that is a temporary bonding? A. He does not suggest that it is a temporary bonding.

• • • • • • • • • • •

3369 Q. Did you try coating cellophane with the so-called spirit varnish that you used? A. Yes, I have coated cellophane with it.

Q. What happents when it dries? A. The cel-
3370 lophane would be coated with a dry resin which is a—well, a dry resin.

Q. Did you then try to flex the cellophane? A. Yes.

Q. And what happened to the so-called spirit varnish? A. Depending on the thickness of the varnish on the cellophane, it could, when deposited in thicknesses of approximately two-thousandths or more be broken off on the cellophane. And in thinner film it would hold on.

• • • • • • • • • • •

3371 Q. I thought you just told me that rubber and resin in a solution was a spirit varnish. A. You asked me the ones I had tried.

Q. Yes. A. And you can mix two varnishes together

and still have a spirit varnish, and that would be the rubber and the resin that I had mixed together and coated the cellophane with.

• • • • • • • • • • •

3375 Q. Now, the linseed oil, did you try coating with cellophane? A. Yes.

Q. And what happened? A. It deposited as an oil on the cellophane. It is a liquid on cellophane.

Q. And that was your conception of what Brandenberger had in mind, was it? A. That is as far as I went with it.

• • • • • • • • • • •

3382 Q. In the demonstration here in court you didn't use, then, any of these three things that Brandenberger suggests might serve as an adhesive, did you? A. Yes. These materials here (indicating).

Q. I mean on the machine when you made the tape. A. No, I used a combination of materials, because here he is bonding two pieces together. I did not bond two ·· es of cellophane together on the machine; I did a coating.

Q. So you turned back to page 1, where it says "a coating" for an insulating coating and where it said "a mixture" and what you produced was a mixture. A.
3383 That's right.

Q. Now who determined what the proportions were going to be in that mixture? A. I determined them.

Q. Did you conduct research before you made that determination? A. I did a few other experiments before I made that combination.

Q. How many mixtures did you make before you selected that one? A. The ones that I selected for use here were just three of many mixtures that I had prepared.

Q. Now what do you mean by "many"? A. Twenty or thirty.

Q. By the way, did all twenty or thirty of them work? A. No, not all of them.

Q. What was wrong with those that didn't work? A. Some of them were too soft, too gooey, some of them had no tack.

Q. Those that were too soft and too gooey, did you get too much oil in them? A. Yes, in some there was too much oil.

Q. And is that the reason that when you made
3384 the final mixture that you selected you had merely a very small amount of linseed oil? A. No, it was partly due to the compatibility of the linseed oil with the rubber, as well as the fact that if I was coating the cellophane I could see no reason to make something which would be so sticky and gooey that it could not be unwound, that it could not serve any useful purpose.

Q. Now in any of these mixtures did you try oxidizing the linseed oil? A. No, I did not.

Q. Did you try to make a mixture which would secure a nice smooth non-tacky surface, like defendant's Exhibit C-5 for identification? A. No, I did not try to secure too many like that.

Q. What was it you were attempting to secure? A. A rubber insulating coating on cellophane which was adhesive.

Q. And pressure-sensitive, normally tacky, could be wound into rolls and unwound without delaminating or offsetting the adhesive? A. That was the end result.

Q. And that what you desired, is it? A. It was
3385 desired to make something using the materials disclosed in the Brandenberger patent which could be used for wrapping cables and wires.

Q. Now the rubber-resin ratio, who decided on that? A. I decided on the ratio.

Q. How many different ones did you try? A. Many; I can't give you the exact number.

Q. Dozens? A. Rubber-resin ratios, I don't think I tried dozens. I would say on the order of five or six.

Q. Why did you select the one you selected? A. It was just typical of the many that I had done.

Q. Within what range did you try rubber-resin ratio, what were the limits of it that you tried? A. For each ten parts—it is converted to 100 parts of rubber, 40 parts of the dry resin up to equal parts of rubber and resin.

Q. By the way, in this Brandenberger patent there is nothing on proportions, is there? A. No, there is nothing on proportions.

• • • • • • • • • • •

3386 Q. Did you have an opportunity to compare the Austrian Kronstein patent with the United States Kronstein patent? A. Yes, I did.

• • • • • • • • • • •

Q. Well, let me put it this way: What is there that is disclosed in the Austrian Kronstein patent, Exhibit 158-T, that is not disclosed in the United States Kronstein
3387 patent? A. I don't think there is any difference in that direction.

Q. That is the United States patent has some things not in the Austrian patent but the Austrian patent has nothing

that is not within the United States patent? A. The United States one has some things in it that are not in the Austrian patent.

Q. The Austrian patent has nothing but what is in the United States? A. It appears to have the same general idea in the Austrian one that is in the U. S. one.

• • • • • • • • • • •

3391 Q. You have been able to make adhesive tape following the Drew patent, haven't you? A. Yes, I have been able to make adhesive tape following the Drew patent.

Q. And you have successfully made it? A. Yes.

Q. And you have successfully made at least one each of the formulas C, D and E, haven't you? A. Yes.

• • • • • • • • • • •

3392 The Court: Will you please take that patent before you.

The Witness: Yes, sir.

The Court: And since it is relatively short tell me how many times the word "bond" or "bonded" appears in the patent.

The Witness: Yes, sir.

The Court: And how many times the word "adhesive" or "adhesives" appears.

The Witness: "Bond" or "bonded" appears four times. "Adhesive" once.

The Court: Look at page 2.

The Witness: "Adhesive" twice.

The Court: Now, isn't it a fact that in each of the four places where the word "bond" or "bonded" appears it relates to the bond or bonding of two sheets of cellophane together?

The Witness: Yes. Where that word appears it does relate to the bonding of two sheets together.

The Court: Two sheets of cellophane together?

The Witness: Yes.

• • • • • • • • • •

3397 The Court: Now, again, isn't it a fact that, first the word "adhesive" appears twice only in this?

The Witness: Yes, your Honor.

3398 The Court: And it appears twice and it is only in one paragraph that it appears twice?

The Witness: Yes.

The Court: All right. And that paragraph deals with what, Mr. Shalita?

The Witness: That paragraph deals with the bonding of two sheets, or two or more sheets of cellophane together with an adhesive substance.

• • • • • • • • • •

3404 The Court: This is cellophane for the purposes of insulation now?

The Witness: Yes.

The Court: That is the thing that is new to Brandenberger?

The Witness: But based on some of the materials that had previously been used. Cloth or paper material had been used about the time of Brandenberger, so I think when he speaks of the rubber solution there he has in mind

the fact that this is an adhesive material that when wrapped will hold. That is one phase of it.

The Court: He does not say that, does he? He says that this material if coated by that will close the pores so that you get a better insulant. That is what he does say, isn't it?

The Witness: But he is using a material that has certain properties to it.

• • • • • • • • • •

Redirect Examination

By Mr. Spille:

3429 Q. Now will you proceed with similar demonstrations on the glass plate with those other sheets coated with a rubber solution that you made last Monday? A. The second sheet is the one marked "Best Test". I have just removed a covering sheet of cellophane and again I note that there is no transfer of adhesive to this sheet.

Q. Please show it to the Court. A. Yes (handing to the Court).

Q. Now this cover sheet, is that exactly the same material as the backing of the cellophane sheet which has the coating of adhesive on it? A. Yes, it is identically the same, coming from the same roll itself, the same roll
3430 of cellophane itself. I will now take this sheet marked "Best Test" and apply the adhesive in contact with the glass.

Q. That is the adhesive-coated sheet, I take it. A. The adhesive-coated sheet in contact with the glass, and gently press down with the back of my hand on the back side of the cellophane. I will do that one again.

Mr. Haight: Let the record show that the witness tried and that time it didn't lift it at all.

• • • • • • • • • • •

3440 Q. Mr. Shalita, I have in my hand a small glass jar bearing on the label "5 per cent unmilled smoked sheet in benzol". Can you identify this jar, please? A. Yes, I can identify it.

Q. What is it? A. It is a 5 per cent solution of unmilled smoked sheet, which is the most common form of natural rubber dissolved in benzol.

• • • • • • • • • • •

Q. And is that a rubber solution then within the jar that you have in your hand? A. Yes, that is a rubber solution.

• • • • • • • • • • •

Mr. Spille: I will interrupt and have it identified with a plaintiff's exhibit number.

3441 (Marked Plaintiff's Exhibit 244 for identification.)

• • • • • • • • • • •

Q. Now please describe what you are doing to the Court. A. I am taking a brush and will brush on to the normal cellophane some of the rubber solution identified in Exhibit 244.

• • • • • • • • • • •

I have coated a portion of the cellophane with the rubber solution.

• • • • • • • • • • •

3442 Q. Will you put the sheet you have just coated with the rubber solution in Plaintiff's Exhibit 244 into the laboratory oven here in court, Mr. Shalita. A. I will.

Q. I am timing it and will leave it in there for a minute.

. . . . . .

3443 Q. Now, will you take the sheet you have just removed from the oven and which has been allowed to come to approximately room temperature here in court and apply it to that same glass plate you have used be-
3444 fore? A. Yes, I will.

Q. Do it lightly, sir. A. Yes.

Q. You are now rubbing it with the back of your hand as you have done before? A. I am.

Q. Will you continue your demonstration and describe it to the Court. Did it lift the plate? A. Very slightly.

Mr. Haight: Just jiggled it, didn't it?

The Witness: Just jiggled, and I think it is important to note that when you apply it in the 5 percent solution with a single brush operation you get a very thin coat, and I would like to leave this one here and take another sheet and put on two coats, because if we put on one heavy coat and put it in the oven we will blister it, which would be readily perceptible, your Honor.

3445 Q. All right, use two coats. Incidentally, Mr. Shalita, while you are doing that coating operation again, if there is any cellophane left in a pressure-sensitive adhesive coated on cellophane, does the residual or detectable amount of solvent increase its stickiness or decrease it? A. It usually decreases it.

Q. Mr. Morris is timing it at this time. Let us leave it in for two minutes this time, that is, in the laboratory oven. My reading of the laboratory thermometer of the temperature inside the oven indicates that it is just about a hundred

degrees Centigrade; correct, Mr. Shalita? A. That is correct.

• • • • • • • • • • •

Q. Now again allow the sheet you have just removed from the oven to come to room temperature, please, Mr. Shalita, which will take how long? A. Oh, about
3446 half a minute. And we will apply this second coat to it.

Q. A second coat from Exhibit 244; is that correct? A. That is correct. I will now apply a second coat of the rubber solution from Exhibit 244.

Q. That is the second coat on top of the first coat, I take it? A. On top of the first coat. I will now put this in the oven to dry.

Q. That is the very same sheet; correct? A. The same sheet.

• • • • • • • • • • •

Mr. Morris: How long are you going to leave that in?

The Witness: Two minutes, to make certain all the solvent is out.

• • • • • • • • • • •

3347 Q. Now, you have removed the second sheet with the two coatings of rubber solution on it from the oven, Mr. Shalita; correct? A. That is correct.

Q. You are now, again, letting it come to the temperature in this courtroom; right? A. That is right.

• • • • • • • • • • •

3348 Q. Will you please describe what you are doing, sir? A. I am applying the sheet marked No. 2, two coats, smoked sheet, with the adhesive side down. I

will place it in contact with the glass plate. I have wiped my hand over the back side of the cellophane, the
3349 uncoated side, applying the adhesive sheet to the glass plate.

. . . . . .

Q. All right, sir. Did it lift the glass plate at all? A. Yes, it did.

Q. Did the plate fall off thereafter? A. Yes.

Q. All right, sir.

Mr. Haight: Just a moment. It lifted it perhaps an inch.

The Court: Would you say that the grab was appreciably different when you had your two coats on than when you had the one coat on?

The Witness: I think it was a little more on the second coat than it was on the first.

The Court: But just a very little?

The Witness: Slightly.

. . . . . .

A. I would like to get the thickness gauge in, because to determine thickness we have a gauge that we have
3349a to use, and when you are applying a 5 per cent solution from a brush, what appears to be a good coating — I am looking at this, it looks almost like a substantial coating, and I think we will find the single coating is in the order of about a half a thousandth, and for most sheeting where you apply an adhesive to it that is pressure-sensitive, you usually use in the order of one-half—an average of a half a thousandth.

3350 Q. Thousandths of an inch? A. Thousandths of an inch; and working with a five percent solution it is very difficult to get that layer.

Q. In a single coat, I take it. A. In a single coat. And possibly in two coats. I would like to check both.

Q. Will you again press against that double-coated sheet you made with the two layers of adhesive on the same side and strip it or peel it from the plate and describe whether it takes force or it doesn't take force. No, strip it from the plate. (The witness complies.) Examine the plate carefully. Has there been any transfer or offsetting of the adhesive to the plate? A. No, there has not.

Q. Show it to the Court, please. (The witness complies.) Did it require force to peel that sheet from the glass plate? A. Yes, some force was required to peel it.

Q. Before you go—

Mr. Haight: Just a moment. By "some force" do
3451 you mean about the force it would have required if there had been a few drops of water between the sheet of cellophane and the glass, about that force?

The Witness: I don't know.

Mr. Spille: We will get some water.

Mr. Haight: You understand that if you have water between the sheet of cellophane and the glass it will take a little force to pull it up.

The Witness: Yes.

Mr. Haight: You understand if you take a sheet and just exhaust the air with just a drop of oil or something, it will take force to pull it up.

The Witness: It will take some force.

Mr. Haight: And that is the order of force you were speaking of when you said it took force to remove it from the plate, wasn't it?

The Witness: I don't know. I haven't tried it with water or exhausting just the air.

• • • • • • • • • • •

3452 Mr. Haight: I didn't get in the point of time that that adhered to the glass plate when you picked it up. It was some small fraction of a second, about a fifth of a second.

The Witness: I didn't time it. It was a very small period of time.

Mr. Haight: A fraction of a second.

• • • • • • • • • • •

3453 Q. Will you measure the thickness of the coating of rubber that you have applied to the sheet you have been describing.

Mr. Haight: This is sheet No. 2?

3454 Mr. Spille: Sheet No. 2.

A. The uncoated portion of the cellophane "mikes" approximately 1.7 mils, 1.5 to 1.57.

Q. Is there any substantial variation in the thickness of— A. With the coating of the smoked sheet on it "mikes" 2 mils, so that there is approximately .5 to .3 mils of rubber on the cellophane sheet. It is quite a thin coating.

Mr. Haight: That is a good solid 2 mils, isn't it? You could even make it 2.1?

The Witness: I was looking right down the center. You can check.

• • • • • • • • • • •

Mr. Haight: Well, that is a good solid 2. Try some more.

3455 Mr. Spille: What is a "solid 2"? I don't understand.

Mr. Haight: Plus. Try some more.

The Witness: 2.1. 2.1 on that one. A not-so-solid 2. and 1.9. 2.1.

Mr. Spille: Your Honor, we intend to put additional coatings on that sheet.

The Court: I am not going to make it adhere. Try to measure the amount of adhesive towards the center instead of towards the end.

The Witness: 2.1 on that. 2.2. 2.15. 3 on that one. We are resting on a bubble at that point. 2. 2. 1.9. 2.2. 2.4.

Q. Now on the average, what is the thickness of adhesive layer or rubber layer deposited on that second sheet you have just been measuring? A. It would be a maximum of—well, let's see. It would be an average of .4 to .6. I don't think we can get it in an exact—because the cellophane varies slightly.

• • • • • • • • • •

3456 Q. Will you please put another coat on top of that very same sheet. Suppose you try a spatula or something like that, if you want to speed up the coating process. A. All right.

Q. Please place that same sheeting in the laboratory oven. I note the temperature is now known as 98 degrees centigrade. Leave it in there for another two minutes, Mr. Shalita. A. All right.

• • • • • • • • • •

3457 Q. All right, sir. A. I have taken a sheet marked 3-coat smoked sheet, which is the smoked sheet

rubber solution coated on the cellophane and dried in the oven. I will now apply the adhesive down in contact with the glass plate.

Q. And how far did it take the glass plate then before the cellophane peeled off? A. About six inches.

3458 Q. Was any residue of adhesive left on the glass plate? A. No.

Q. Now, Mr. Shalita, I hand you—

Mr. Haight: Just a moment. It took about a half-second, didn't it, to get it up to that height?

The Witness: Yes, I think about half a second or so.

Mr. Haight: And the area there was substantially the area of the plate, was it?

The Court: Substantially.

The Witness: Yes, substantially the area.

• • • • • • • • • • •

3460 Q. What is the approximate coat of the adhesive left on the sheet we have been describing, Mr. Shalita? A. Approximately a mil point 3. Approximately a mil point 3.

• • • • • • • • • • •

Recross Examination

By Mr. Haight:

3474 Q. Will you turn to the Brandenberger patent, please. The last question the Court asked you was if that wouldn't be Brandenberger's. I would like to have

you point out to the Court on page 2 where Brandenberger says to put nitrocellulose on the sheet of cellophane to accomplish his object. A. I said he did not say that.

Q. Well, I just suggest you turn to page 2 and show where he did. The second paragraph, the first sentence. Will you read that please. A.

> "Instead of ordinary cellulose sheets we can use cellulose sheets which have been treated in such a process so as to present a surface coated with fatty ethers of cellulose, either nitrated or acetylated superficially."

Q. What does that mean to you? A. That is a method, as Mr. Brandenberger states, of chemically forming nitrocellulose or cellulose acetate on the cellophane itself. It is not a coating.

Q. And for his purpose he indicates that it worked, doesn't he? A. Yes.

Q. Because his purpose was merely to close the
3475 pores, wasn't it? A. His purpose in putting the treatment on—chemically converting the surface of cellophane to an acetate or a nitrate is to chemically form this protective material on the base itself.

Q. And why does he want it there? A. He mentions to close up the pores of the cellophane.

Q. All right. And he says he can use that without any coating at all, doesn't he? A. Yes.

* * * * * * * * * *

3479 Now, then, let us leave out the coated products, as to which there may be debate, but let us just review the four products as to which we are in complete agreement. First you can insulate with a plain sheet of cellophane, and he says so, doesn't he? A. Yes.

Q. Second, you can insulate with two sheets of
3480 cellophane pasted together, with no adhesive on the exterior? A. That is another form of construction.

Q. Third, you can have your plain sheet of cellophane and treat the surface to convert it into cellulose nitrate? A. Yes.

Q. And fourth, you can treat the surface to make cellulose acetate? A. Well, 3 and 4 go together, in my mind.

Q. All right, they are separate in mine. So that makes the four, doesn't it? A. It makes four for you and three for me.

Q. All right. Now in none of those instances does he have an adhesive; that is correct, isn't it? A. In none of those instances does he have an adhesive; he is just talking of his backing material in these three instances.

Q. What do you mean by the backing material? A. He is talking about his insulating material is the cellophane which is treated or coated, because the plain cellophane is not his preferred one. He closes up the pores. And among the ways he closes up pores is to coat the
3481 cellophane in some manner or laminate it together or to take the laminant and coat them.

• • • • • • • • • •

3500 Q. Now of course that weight can also be held by a person buying commercial tape and putting a half-inch square contact, which would be enough, wouldn't it?

A. Possibly. I would have to try it. I couldn't say
3501 that a half-inch square contact would be sufficient.

Q. Well, what is the width of this tape? A. Three quarters of an inch.

Q. All right. I will try to take off a square of the tape, or maybe a little bit more than a square, and I will fold one corner of it and that will hold it, won't it? A. Yes, it will.

Q. Now, the area of the adhesive, or at least one of these examples probably typical was about 26 square inches. A. Where do you get the 26 inches?

Q. 6½ x 4 inches would be 26 square inches, wouldn't it? A. Yes.

* * * * * * * * * *

3502 Q. And the ratio of area to weight was 26 square inches to 12—well, let us call it 12 ounces weight, which means that it took better than two square inches to hold a one ounce weight when it held it. A. I assume your calculations are correct, Mr. Haight.

Q. Well, I was dividing 12 into 26, and it seemed to me to go a couple of times. A. Right.

* * * * * * * * * *

Q. Did you compare the Kronstein addition? A. Yes, I did.

Q. And the Austrian does not show anything that any of the others do not show? A. No, they are about the same, Mr. Haight.

3503 Q. And that included all of the Kronstein patents? A. The English, the French, and the U.S. compared to the Austrian, which we discussed at length.

Testimony of **Richard G. Drew**, called as a witness by Technical.

Direct Examination

By Mr. Morris:

. . . . . .

1546 Q. You remember that you also testified in the suit of Minnesota Mining v. International Plastics? A. Yes.

Q. That was before Judge Barnes in Chicago, is that right? A. Yes.

Q. Now you were the applicant for the patent which is here in suit, 2,177,627, were you not? A. Yes, sir.

. . . . . .

1547 Q. You are now employed by Minnesota Mining, aren't you? A. Yes.

Q. You first became employed in what year? A. 1921.

Q. And have been continuously employed ever since that time? A. Yes, sir.

Q. Your position now is what? A. Oh, Director of Products Fabrication.

Q. What does that mean, Mr. Drew? A. I have charge of some 17 men as a separate laboratory, and my responsibility is to do whatever I can in the direction of originating new products for the company.

1548 Q. And to have your men do the same thing, the 17 of them? A. Yes, I would say so.

Q. All engaged in the same sort of work? A. Yes, sir.

Q. In 1927, let us say, what were your duties at Min-

nesota Mining? A. I was heading up the tape activity at that time.

Q. And in 1926? A. The same duty.

Q. And in 1925? A. 1925, part of 1925 I was helping a Mr. Okie, who was the developer of waterproof wet-or-dry sandpaper. I was working for Mr. Okie the early part of 1925.

Q. Now was 3M essentially interested in sandpaper in 1925 or in tapes? A. Sandpaper.

Q. It sort of branched out into tapes in '26? A. Starting about, to the best of my knowledge, about June, May or June of '25.

Q. And were you that one that, under the proper direction, initiated the tape end of the business? A. At the very beginning?

1549 Q. Yes. A. I initiated it.

Q. And the first product that you got out was the masking tape? A. It was known as 3M non-drying tape at that time.

Q. That is what we now call masking tape? A. Yes, sir.

Q. That at that time was a paper-backed tape, you know, the first of it, in 1925, '26, whenever that was? A. Yes, it was.

Q. What kind of paper did you first use? A. The very first masking tape had a backing equivalent to a good grade of wrapping paper. In fact, I think it was, it could be rightfully called wrapping paper.

Q. And what kind of an adhesive did it have on it? A. It had a gelatin or, rather, a high grade cabinetmaker's glue

adhesive plasticized with glycerine. It was very much like the composition of a ditto blanket.

Q. Did you have to wet that to reactivate it? A. No, sir.

1550 Q. That stuck all by itself, like the thing we now call the pressure-sensitive adhesive? A. Yes.

. . . . . .

1551 A. So, it was my duty to take these different hand spreads that I made up for Mr. Okie, using varnish as a binder to hold the grit on to the paper, and I was to and I did take them out to the auto paint shop, there in St. Paul, and wait until the proprietor of the paint shop, the foreman rather, tried them out on different bodies, automobile bodies, and then take them back to Mr. Okie with the man's comment. And that exposed me to the problems that the paint shop man was experiencing in those days. . . . And Mr. Gordenier had tried different masking materials to prevent the overspraying from the spray gun. And I walked into the shop one day, and he was quite handy with profanity—I had heard him—and he had used regular gum tape to do that very thing, make an apron on the car, and was taking it off and it had
1552 pulled some portion of the lacquer, on which it was placed, off with it, necessitating him redoing the job to some extent at least. So, for one reason or another, the thought hit me that what Mr. Gordenier wanted was a non-drying gummed tape rather than one that would adhere to the lacquer so firmly.

. . . . . .

A. So, I took some of it and made a hand spread, as Mr. Okie used to call them, and spread out this gummy sticky oil on a 6-inch width of paper, 18 to 20 inches long or
1553 longer, and took it back to Mr. Gordenier, who tried

it on a car. That was the very beginning of it.

Q. When you speak of a hand spread, do you mean spreading of adhesive on a backing by hand operation? A. Yes.

Q. When you spread it on by way of machine, do you call it a machine spread, or is there any name for it? A. Well, the first hand spreads I made, or that Mr. Okie taught me to make, were made by putting a piece of paper on a piece of plate glass on a laboratory bench, holding it down at one end with a clamp, pouring on whatever materials should be spread, and then taking a stirring rod, a glass stirring rod, and pull it down the lengtth of the paper. The excess scraped off at the end. That was known as a hand spread. And when this idea of a non-drying tape hit me, and I had made a few hand spreads, the thought occurred to me that I could make a small machine, you might say a steel platform, with something like a French guillotine knife on it, and that it would contribute to more uniform hand spread work.

Q. So that you could adjust the knife upwardly and downwardly— A. That is correct.

1554 Q. —and control the thickness of the adhesive that was going on the backing? A. That i right.

Q. Now when you took this hand spread piece of paper over to Mr. Gordenier, did he stick it on an automobile? A. He put it on a Packard he was refinishing.

Q. Packard? A. Yes, sir.

Q. What happened? A. The Packard was an Imperial or a Royal Blue, and apparently the acid value—I am not a chemist, but I understand there is an acid nature to oil—the acidity of the oil, if that is proper to say, completely

bleached the Royal Blue color out of the lacquer and made it look more like a robin's egg blue.

Q. And that you saw after he pulled the piece of paper off? A. I saw it the next day or two.

Q. Well, did the adhesive that you put on the paper stay with the paper or stay with the automobile? A. Well, he was able to remove the paper, but not all the ad-
1555 hesive came off with the paper. It wasn't a satisfactory adhesive by a long way.

Q. You mean some of the adhesive stayed on the automobile? A. Yes, sir.

Q. So, then, you had the problem of getting an adhesive that would stick to paper and would not stick to the automobile? A. Yes, sir.

Q. I suppose you then went ahead and tried to solve that problem? A. Yes, sir.

Q. Ultimately you did solve it when you got this masking tape with the paper back? A. Well, it was solved reasonably well when I employed the glue gelatin or the glue plasticized with glycerine. We made substantial quantities of non-drying adhesive through 1926, some part of 1927. It wasn't very good, but the trade bought it because there was nothing better to use.

• • • • • • • • • • •

1556 Q. You ultimately did solve that, didn't you? A. Oh yes, yes.

Q. What kind of an adhesive did you have on that paper that solved that problem? A. It was the glue-glycerine adhesive.

Q. The glue-glycerine adhesive?

• • • • • • • • • • •

1557 Q. What was that, in tape form with the adhesive on one side and not on the other? A. Yes, sir.

Q. And that was rolled up into rolls? A. Yes, sir.

Q. Like we have today in the form, let us say, that is what I mean, of masking tape rolls, as put out by Minnesota Mining? A. It had to have a cheesecloth liner in it in order to have it unlined without splitting the paper.

Q. You mean there was a layer of paper, a layer of adhesive, and a layer of cheesecloth? A. Yes.

• • • • • • • • • •

1559 Q. But you were trying, even at that time, to solve the problem of the relation between cohesion and adhesion? A. Yes, sir.

Q. And you went right on trying to solve that in connection with your masking tape? A. Yes, sir.

Q. That attempt to solve that problem involved the exploration of papers, of paper treatments— A. Yes, sir.

Q. —and of adhesives, didn't it? A. Yes, sir, it did.

Q. What did you do in exploring the paper possibilities? A. Well, our first objective was to get away from the cheesecloth liner because it was awkward for the workmen to have to remove it. So we tried to get a paper
1560 that was sufficiently tough and the fibers were sufficiently unified, as we have learned to call it, so that we would not have to use the cheesecloth liner; it would tolerate being wound up on itself and unwound without in any way disrupting the paper. And we tried a number of things on the market, different kinds of treated papers, wax papers; we tried papers coated with asphalt that had a cheesecloth netting imbedded in the asphalt coating. We did such things, trying to find a satisfactory

backing that could be used for tape without requiring the adhesive to be covered up.

• • • • • • • • • • •

1562 Q. Now there came a time when you did settle—well, let us see. You said you first tried out ordinary kraft paper. It was like wrapping paper, wasn't it? A. Yes sir.

• • • • • • • • • • •

Q. That is you would take a piece of paper such as kraft paper, or the oiled paper or whatever papers came along, and you would make a hand spread of the adhesive that you were using at the time to see what would happen? A. Yes, sir.

1563 Q. And what happened, happened, didn't it? A. Yes, sir.

Q. Now the hand spread that you put on those various papers, and that adhesive in those days was put on the papers in just the same way, that is, by either rolling it on with a rod such as you have spoken of, a stirrer, or with a knife? A. Yes, and once in a while a wringer roll.

Q. And when Guth brought in a couple of pieces of cellophane around 1929 you did the same thing with them, you took some adhesive that was currently used on the masking tape and made a hand spread of that to see what would happen, didn't you? A. Yes, sir.

Q. And what happened, happened? A. Yes, sir.

Q. And you did not do anything different there except use different material on the backing than you had been doing before in connection with the other experiments that you carried on? A. Yes, sir

Q. And as a result of that hand spread, when you

1564 evaluated it you found that the adhesive that you had spread on, which was the current standard adhesive for the masking tape, stuck to the back of the cellophane, didn't you? A. Yes, sir.

Q. And you found also that when you let it dry for a little while or stand a little while you could stick it on another piece of cellophane and it would pull off? A. Yes, sir.

Q. Just as the masking tape would pull off? A. Yes.

• • • • • • • • • •

1570 Q. And those sheets of cellophane that Guth got from DuPont, they were obtained in July of 1929, weren't they? A. I don't know for sure. Maybe June or July.

Q. But either the latter part of June or the first of July, the first part of July? A. Around that time.

Q. And when they came in how long did they lie around before you put some masking tape adhesive on pieces of them? A. Oh, I don't know exactly. Maybe—maybe two or three weeks, maybe not that long; maybe longer.

1571 Q. Tell me just what you did in spreading that masking tape adhesive on those pieces of cellephone. A. Well, the first step was to cut the sheet of cellophane down to a 6-inch width or at least cut a 6-inch width piece of cellophane out of the sheet so that it would fit into the knife coater, and then that 6-inch width was placed in the knife coater, some of the masking tape adhesive poured on the cellophane directly behind the knife, and then the 6-inch piece of cellophane pulled through under the knife manually to establish a coat of adhesive on the surface of the cellophane.

Q. Then what did you do? A. Well, the usual practice then was to allow the solvent to dry out and after that happened I cut a one-inch strip of freshly-made hand spread from one edge of the 6-inch strip, placed it on the back of the remainder of the spread, the uncoated surface of the remainder of the spread, ironed it on with a little caster, a roller, and then ripped it off. That is the standard procedure.

Q. What do you mean by "ripped it off"? You mean you gave it a quick yank? A. A fairly quick removal effort.

• • • • • • • • • •

1572 Q. And what was the composition qualitatively and quantitatively of the masking tape adhesive that you used in that work? A. Well, it had rubber zinc oxide and rosin. I don't know offhand whether it had oil in it or not.

Q. What kind of rubber did it have? A. I believe we used smoked sheets.

Q. And what kind of rosin, do you know? A. Solros.

• • • • • • • • • •

1576 Q. And the aging of the adhesive, whether on a paper backing such as masking tape or on a cellophane backing, it is just the same, isn't it? I mean, as far as the aging is concerned, it didn't make any difference what kind of backing it is on? A. I don't think that is true. I think the backing in some cases, in my own experience, had something to do with the good aging of the adhesive.

• • • • • • • • • •

1579 Q. Did you submit those hand spreads that you had ripped off in June or July 1929 to anyone around

that time? A. Yes; I brought the hand spreads to the tape meeting in Mr. Carlton's office some time later.

Q. That was as late as August 13, 1929, wasn't it? A. According to the record, it is the actual date.

• • • • • • • • • •

1580 By the Court: Q. Was it your idea to get the
1581 cellophane sheets or the samples of cellophane paper from duPont, or did Mr. Guth get it? A. Mr. Guth brought them in.

Q. And up until the time Mr. Guth brought it in, your mind hadn't run in the direction of cellophane paper or application of cellophane paper with adhesive tape—with adhesive? A. No, sir, it hadn't.

Q. Never occurred to you. And when Mr. Guth brought that paper in did he bring it in to you with a view towards developing a wrapper for the masking tape so that you could have a moistureproof wrapper for it, or did he bring it in to you with a view towards your experimenting with it to develop a tape with a cellophane backing? A. He requested the sheets of cellophane from duPont to go ahead with the project. Mr. Carlton had assigned him to wrap the individual cartons of masking tape in moistureproof cellophane to reduce the take-on of moisture during high humidity periods.

1582 Q. So up until that time there had been no thought about using cellophane as a backing for pressure-sensitive tape? A. Not on my part I had not.

• • • • • • • • • • •

1583 Q. When the cellophane came in from duPont in June or July of 1929, you simply took the masking tape adhesive that you had around and that was being used

on masking tape at that time and spread it on the
1584 cellophane as you had spread the same adhesive on different other kinds of backings such as kraft paper or the combination of kraft and parchmentized paper? A. Yes, sir.

Q. And the others? A. I used the same procedure.

The Court: Was it your practice to try out these different types of papers or material?

The Witness: Yes, sir.

The Court: And in doing that you just tried out some adhesive on it.

The Witness: Not just for the fun of it was I doing it.

The Court: Of course you were not there to entertain yourself.

The Witness: No.

The Court: You just were trying it out experimentally to see what would happen, is that it?

The Witness: I had a particular objective in mind in trying it.

The Court: You had never heard of cellophane tape before, so that your objective developed after you first saw the paper?

The Witness: Yes, it did, sir.

1585 The Court: In June or July when that sample of paper first came into the laboratory, some thoughts came to you and you decided that you were going to try out the masking tape adhesive on it?

The Witness: I had a problem, your Honor, submitted by a local paper jobber, which was to wrapper-enclose some

black lining insulation in a sufficiently waterproofed manner so that the finished package could be submerged in water for a given period of time. I don't remember how long, and that finished package with the black lining insulation inside was to be used in refrigerator cars, and railroad cars. That problem was brought to me by Mr. Dave Simon of the Anchor Paper Company. He had already tried masking tape and it had its limitations, and I was after something better than masking tape from a waterproofing angle in order to meet that test of submerging in water, and that is one reason I tried the parchment kraft paper, and I tried a number of things to get maximum waterproofing resistance and the submersion test. And when I saw cellophane and knew there was such a thing as moistureproof cellophane, I had the idea of evaluating it on that package.

• • • • • • • • • • •

1586 Q. And there wasn't anything particularly that you did beyond spreading the adhesive onto the cellophane and letting it dry and then sticking it to another piece of cellophane; that is true, isn't it?

• • • • • • • • • • •

A. Well, in doing it I educated myself to some extent on the physical properties of cellophane and gained
1587 some appreciation of whether cellophane had the right makeup to it, the right physical properties to serve as a tape backing.

Q. And that was the evaluating that you did after you had carried out these mechanical operations that I have just spoken about, is that correct? A. The mechanical operations helped me to do that, to make that evaluation.

Q. Now in the mechanical operations all that you did

was to clip off a piece of normal cellophane and spread the masking tape adhesive upon that and then stick it to another piece of cellophane which was on the table or the workbench; that is right, isn't it? A. Not exactly. I turned the 6-inch hand spread after I had cut an inch or so off one edge I then turned the balance of the hand spread over adhesive upside down and put it on a piece of plate glass and then ironed the one-inch strip onto it.

Q. Yes, to see whether it would stick to it or not. A. And come off.

Q. And come off. A. Yes, sir.

Q. That is all you did, isn't it? A. Yes, physically.

* * * * * * * * * *

1601 Q. In August 1929 you hadn't gotten very far with the masking tape as a commercial product, had you? When I say "you" I am talking about 3M. A. I think we had come a substantial distance on masking tape at that time. We had gone through a number of phases, you might say, and had arrived at a construction that was satisfactory generally. It was not perfected, but it was sufficiently satisfactory to build up sales.

Q. And the meeting on August 13, 1929 was to discuss generally the masking tape problem and perhaps improvements in that, and so forth; is that right? A. Yes, tape problems generally.

* * * * * * * * * *

1602 Q. Now at that meeting, those hand spreads were exhibited to the various persons at the meeting, weren't they? A. They all looked at them.

Q. And the general concensus of opinion was that they might have possibilities? A. Yes.

* * * * * * * * * *

1603 Q. Do you know the Waldorf Paper Company? A. Yes, sir.

Q. Do you remember that company? A. Surely.

Q. Sometime in 1929 you visited that company, didn't you? A. Yes, sir.

Q. And did the question of a transparent adhesive come up at that time? A. I think so.

Q. Who was the designer at the Waldorf Company? A. I know the man's name; I can't think of it at the moment.

Q. Well, perhaps you can later. Did this designer ask you whether you could make a tape as transparent as glassine and with the kind of adhesive which would stick to a highly enameled paper surface? A. He did.

Q. Now after that meeting of August 1929 there was an attempt to produce some of this cellophane tape or strips with the masking tape adhesive on it by using some kind of machinery, wasn't there? A. Yes, sir.

1604 Q. And where was that attempt made, in what part of the plant? A. Oh, in the basement of what we called the wet-or-dry sandpaper building.

Q. You didn't even attend that run, did you? A. Yes, sir, I think—I don't know whether I attended the first run or the second run. I recall being present when some cellephane was put through the machine.

. . . . . .

Q. And some of that was run through on this machine down in the cellar, wasn't it? A. I believe so.

The Court: What kind of machine was this?

The Witness: It was the knife coater that was being

employed to coat masking tape.

1605 Q. It was a machine as distinguished from a hand coater? A. Yes, sir.

Q. Now at that run did they use that September 4th cellophane? A. I believe so. Some cellophane was ordered from duPont shortly after the meeting in Dick Carlton's office.

. . . . . .

1607 Q. On these hand spreads that you made in June or July 1929 the resultant composite tape was white, wasn't it? A. No, sir.

Q. Because of the zinc oxide being present? A. No, sir.

Q. Was it transparent? A. No, sir.

Q. Was it yellow? A. Yes; brown.

Q. The zinc oxide made it yellow, did it? A. No, sir.

Q. What made it yellow? A. The Solros rosin.

Q. But the zinc oxide made it opaque? A. Yes, sir.

Q. So you had yellow opaque tape? A. Yes.

. . . . . .

1608 Q. If you had left the zinc oxide out of the masking tape adhesive would it have been a transparent adhesive?

. . . . . .

1609 A. My answer is yes, if the zinc oxide had been left out the adhesive would have been transparent rather than opaque. But it wouldn't have been a—it would have had a brownish cast coloring to it, due to the Solros.

By the Court: Q. Was the zinc oxide put into the form-

ulation just for coloration? A. No, sir.

1610 Q. So that if you removed the zinc oxide the adhesive would be a different adhesive? A. Yes, sir, it would.

Q. Not alone different in color, but it might have been defective or—A. It would have different physical properties.

Q. Which might render it unusable for the purposes for which it was used? A. Yes, sir.

By Mr. Morris:

Q. Well, if you left out the zinc oxide from that masking tape adhesive would it have rendered it unusable as a pressure-sensitive adhesive for tape? A. Let's see. We are still talking about the 137-30 Solros.

Q. Yes, that is the adhesive that you were using in June or July 1929. A. In that particular formula I would think offhand that would have been very close to one or more of the experimental transparent adhesives we subsequently evaluated. That would be 137 pounds of rosin to 250 pounds of rubber.

Q. It would have been satisfactory? A. I think it is in the same class as the exploratory transparent ad-

1611 hesives we subsequently came to.

Q. I am not quite clear on that. If you took the zinc oxide out it would still be a satisfactory pressure-sensitive adhesive for tape; am I right in that? A. Well, it will not be the kind of adhesive we eventually arrived at. But, as I said before, I think it would be in the same classification as the early exploratory formulas we evaluated.

Q. In so far as it would have been satisfactory from the

point of view of non-offsetting or non-delamination; is that right? A. I think so, yes.

Q. And also it would have been satisfactory from the point of view of tackiness? A. Yes.

Q. But that was not the kind of formula that you ultimately arrived at; you had a different one than that, didn't you? A. Yes, sir.

. . . . . .

1612 Q. And part of your conversation with Mr. Miller (Shellmar Products) was about the possibility of improving the appearance of the masking tape construction which you were then manufacturing so it could be employed as a sealing medium on cellophane-wrapped packages? A. That was part of it.

Q. Shellmar was a specialty printer organization, wasn't it? A. Yes. Their specialty was printing cellophane.

Q. Printing slogans and whatnot on the cellophane? A. Yes.

Q. And at that discussion with Mr. Miller he suggested using a transparent adhesive on the cellophane tape, didn't he? A. I made the suggestion.

Q. You made the suggestion? A. Yes, sir, I did.

Q. What was the date of that? That was in June 1930; is that right? A. Yes, sir, approximately. I would like to make a correction, if I may.

1613 Q. Yes, of course. A. I do not know whether I suggested the use of transparent pressure-sensitive adhesive at the meeting or shortly thereafter, for sure.

. . . . . .

1630 Q. Now in one of those letters, Mr. Drew, you said
1631 to Shellmar Products, or Minnesota Mining did, that you were working very hard on making the kind of adhesive and tape that they want; do you remember that? A. Yes.

Q. And one of the things that was being done was an attempt to get the adhesive transparent? A. Yes.

Q. And the other was to match up colored tape such as duPont's colors in their cellophane? A. Yes, sir.

• • • • • • • • • • •

1633 Q. Now once having a pressure-sensitive rubber-resin adhesive for use on cellophane backing to form a tape, there was no considerable problem to make that adhesive colored, is there? A. I don't think there is. Just the selection of the right color pigment ground into the rubber.

Q. That is, if I had a clear or transparent adhesive of the rubber-resin type or, let us say, of any of the types of Examples D and C or E of your patent in suit, to make those colored would be only a matter of putting a dye in or some pigment? A. Yes, exploratory compounding.

Q. That is, you would have to determine the amount by trial and error? A. Yes, sir.

Q. And that would be in order to get the proper shade of the elected color? A. Yes.

1634 Q. But there is no problem in compounding, is there, the color with the adhesive? A. The selection of the right color pigment and the quantity to be added to the base stock. If I recall accurately, I think on one or more occasions we ran into trouble because a certain color pigment might produce poor aging on the rubber on the pressure-sensitive adhesive.

Q. That is when the pigment was used? A. Yes.

. . . . . .

1635 Q. The addition of a pigment or of a dye to the adhesive is something that in 1931 the ordinary chemist would have known how to accomplish, based on his background of chemistry?

Mr. Haight: May it please the Court, that is not asking a factual question of this witness. As to what would be within the knowledge of an ordinary chemist in 1931 calls for a conclusion and it is not a factual question which they said they wanted to ask Mr. Drew.

The Court: Well, are you a chemist, Mr. Drew?

The Witness: More of a cook.

The Court: You are modest enough. Are you familiar with what a chemist is likely to have known in 1931 with reference to pigments and dyes?

1636 The Witness: I think so, in a general way. I haven't had any experience personally.

The Court: Well, I don't think he is competent to answer that question. You are just one of those "tinkering fools" that comes up with some pretty good things once in a while?

The Witness: Yes.

. . . . . .

1820 Q. Now, Mr. Drew, you said you used whale-hide parchmentized paper. A. Yes, sir.

Q. Is that whale-hide the trade name or is it the name of a certain kind of parchmentized paper, a certain class of parchmentized paper? I never heard of it. I don't know. A. I don't either. It was made by the Kalamazoo Vegetable Parchment Company.

Q. And you knew it as whale-hide paper? A. Yes.

1821 Q. Now, what did that look like? A. It was somewhat tan-colored, brownish-tan, and it was, as I recall it, uneven. It had a freckled, mottled appearance to it.

Q. Was it clear paper, or could you see through it? A I couldn't see through it.

• • • • • • • • • • •

The Court: Did you ever look at that whalehide parchment paper through a microscope?

The Witness: I think—I am saying "I think" when I should not.

The Court: Yes, and you don't recall?

The Witness: Yes, I do recall. I do recall.

The Court: Did it look to you like a smooth gelatinized type, or could you see the fibers?

The Witness: Your Honor, I couldn't see the surface. I could see the fibers, but the exact physical nature of the base of the parchment paper I am not qualified to
1822 describe.

The Court: Was it smooth or did it have any hills and valleys or any indentations?

The Witness: It did not look smooth.

The Court: All right.

• • • • • • • • • • •

By Mr. Morris:

Q. So you could see some remaining fibers when you looked through a glass or however you did, at that piece of parchmentized paper that you spoke of a moment ago?

A. You could see some of these fibers. I could see fibers, yes.

Q. But the outside of all the fibers were gelatin-
1823 ized?

A. I am guessing at that from the description of the process. I actually saw the process of parchment paper making at Kalamazoo for the better part of one afternoon, and there I saw the paper dipped into the acid and I saw it brought out. I saw it dipped in water and I saw it running up and down rolls with water showers playing on the surface to neutralize the acid, and then I saw it wound up, dried and wound up.

• • • • • • • • • •

1824 Q. All right. Now, going to your 1,760,820 patent, page 5, column 2, line 84 and so forth, looking at that from there down to 110. I mean the description on page 5 of the masking tape, page 5, column 2; do you see that? A. Yes, sir.

Q. Now, from line 84 on down to the bottom of that page it describes a way to treat the paper so that it will be strengthened and flexible, and so that you will get as smooth a surface as possible; isn't that true? A. No, sir.

Q. What part of it isn't? A. This describes an attempt to unify a piece of absorbent toweling paper.

• • • • • • • • • •

1931 Q. Have you no recollection yourself of it? The letter does say that and we can rely on the letter, but I am trying to find out what you know, Mr. Drew, you see, not just what you get from letters, unless it refreshes your recollection as to what went on back there. A. I know what went on generally, that right around that period, and maybe slightly before, we started in exploring transparent

pressure-sensitive adhesives. I don't know how many explorations or formulae were made up prior to that particular one. And I know that that is about the time we began to put a lot of effort, or some effort, on the formulation of the transparent pressure sensitive adhesive.

• • • • • • • • • •

Cross Examination

By Mr. Haight:

1978 Q. Mr. Drew, several days ago you were describing making a hand spread, and I don't want to go through what the steps were now because I think that
1979 is sufficiently on the record, but you testified that you had used that method with masking tape and then later used it with cellophane. I would like to have you just state briefly why you evolved that method of testing a proposed tape, or what was the purpose of that method of testing. A. Yes. The test itself came the closest of anything I could think of to duplicating at least some of the stresses and strains put on a tape when it is unwound from roll form in the finished product. The hand spread technique does not bring into play all the troubles, but it is a quick way to get at least a rough idea of how the tape might behave in roll form.

Q. Now in the masking tape that you coated with adhesive, what was the surface on to which you put the liquid adhesive? A. Well, it was rough, it was on toweled paper, crepe paper, and so it was rough; and, in addition to that, having treated the paper ourselves I was in a position to control what I used to refer to as a dry finish on the face, or the side to which the adhesive is coated, in the process of treating that would become established, and then we backsized later, but we have a dry finish in the surface to

which the adhesive is coated, and then a not so dry
1980 surface on the back side to which the adhesive makes
contact when it is in rolled form. And there was a good deal of work done to establish that preferential.

Q. Now there was one point in the record where there was some question as to what is the face and what is the back. I have here a roll of tape with the adhesive on the bottom. Now that bottom is what you have referred to as the face, is that right? A. Yes, sir. The surface which carries the adhesive is the face side.

Q. And then the back is the portion with no adhesive on it? A. That is the back side.

Q. When you said you backsized, what do you mean by that? A. I put a treatment on the back side, the side that does not carry the pressure-sensitive adhesive.

Q. And what was that treatment for? A. That was to make it more difficult for the adhesive to stick to the back side because of that added treatment it carried, compared to the drier side or finish on the face side to which the adhesive is coated.

Q. Now then when you were making your hand
1981 spreads with the masking tape you had the sheet
pressed down against the glass, with the adhesive down, and you had the back side portion up, and then would place the adhesive of the next strip on it and remove the strip with the adhesive; is that right? A. That is right.

Q. And the adhesive came with the side on which it was coated? A. Right.

Q. And that was the side where you had the rough surface without the backsize? A. That is right.

Q. Now when you made your first hand spread, using

cellophane, was there any difference on that cellophane between the face and the back side? A. No different at all.

Q. Well, then, did you have an idea what was going to happen when you pulled that first strip up from the hand spread? A. From previous experience I think I might have been or was surprised that there was no delamination of the adhesive from the side on to which it was coated to the back side or the surface on to which it had been pressed because both sides were identical.

* * * * * * * * * * *

1982 Q. Now, back at that time, we can cover the period 1929, 1930, did you have some men working with you and under you? A. Yes. I had maybe four or five men responsible to me. I was the supervisor of this laboratory.

Q. Well, how did you operate at that time? Did each of you do the same work, or how did you operate? A. It was a question, a good deal, of talking shop and then asking some one man to take over that phase of the work and do it.

1983 Q. And did you use the men in your laboratory to carry out specific jobs that you wanted done and develop the work? A. That is what they were there for.

Q. That is the reason they were assigned to you? A. Yes, sir.

Q. And you did use them on this project that ultimately eventuated in the patent in suit? A. I did.

Q. And you used them on other projects in the same way? A. Yes, sir.

Q. Can you name those men? A. Well, there was Gil Gehrenbeck, Grant Merrill, Al Wartha, Harvey Livermore.

That is about it. This fellow Guth was in there in the same room, and he had been given special assignments by Dick Carlton in the direction of tape treating.

• • • • • • • • • • •

By the Court:

Q. Mr. Drew, perhaps instead of asking you questions I will give you a problem that is in my mind on which
1984 I would like to have you expound and tell me. I would like to know just what part of the work you did in developing these adhesive formulae and what part the other people did. What was your role in their development? A. To outline the work to be done basically, suggest ideas to follow through on in determining whether we should go this way or go that way in some problem involving construction. These men were sent to me by Mr. Carlton. For quite some time I worked alone. And when things began to get a little complex and too many irons in the fire, Dick would send me a man to do the bench work, a pair of hands to follow through on ideas that I had and didn't have the time to do all myself.

Q. That is the role you played generally in the development of these formulae, the adhesive formulae? A. Yes. There were times when these men, as they picked up the art, would have ideas of their own. I didn't have all the good ideas in the laboratory, by a long shot. But in this period when they were all relatively new.

Q. And what period was that? A. Well, from, really starting about 1928 through '29, '30, maybe a year
1985 or two more. Then it became more formalized and many more men added.

Q. Now when was the Formula E developed? A. I don't know offhand, your Honor.

Q. Would you say, with respect to Formula E, that it was your conception and you just had other hands help you do the manual work? A. I am very sure of that.

Q. And you had others who bore the relationship to you that you described very modestly that you bore to Dr. Okie as his flunky, sort of? A. Yes, sir.

• • • • • • • • • • •

By Mr. Haight:

1986 Q. You were asked with respect to adhesives, and now I am going to transcript pages 1783-4 with respect to an adhesive furnished by duPont in work being done at 3M and by duPont on sealing masking tape in moistureproof cellophane. Do you recall that time back in 1929? A. I recall it very well. Mr. Guth worked on it from early '29 on through until October or November. It was very important to me because we were having considerable trouble with our masking tape taking on moisture out in the trade.

Q. Do you recall how that adhesive was used? A. Yes.

Q. Or was to be used, how it was proposed to use it? A. In a general way I do. As the letters instruct, it was to be brushed on the moistureproof cellophane and then the ear of the package or flap of the package folded over and dried.

1987 Q. Do you remember whether heat was used in drying it? A. Yes; they recommended a hot plate, I believe. At least Guth used one.

• • • • • • • • • •

Redirect Examination

By Mr. Morris:

1992 Q. Now you said a little while ago that you were surprised, as I recollect what you said, that when you had made this hand spread and stuck one piece on to 1993 the other, that there was no offset? A. Yes, sir.

Excerpts from Plaintiff's Exhibit 28

Deposition testimony of **Richard G. Drew** on adverse examination:

(Page numbers at left refer to pages of deposition transcript.)

Direct Examination

By Mr. Morris:

. . . . . .

15 Q. So the date that you testified that you made the invention of this patent in suit was some time before August 13, 1929, isn't that right? A. Yes, in a certain sense that is right. I would like to add that the reason I made that statement "yes", the date of the patent was some time prior to—the date of the invention was some time prior to August 13, was because from my point of view I considered the first evaluation of cellophane as a backing to be the date of the invention. I still say that that is true in a sense. But these hand spreads you have reference to did not employ a transparent adhesive, nor did they employ a colored adhesive in the sense I use it, but I was evaluating an entirely new concept of backing ma-

terial for a pressure-sensitive tape, and for that reason I answered "yes" to that particular question about
16 date of invention. As a fabrication man, to me that was a very substantial advance in the art, shall we say, a very substantial change of pace from all the prior art I knew anything about, my own prior art in masking tape, and in my mind it was a very important time in the development of cellophane tape, because I had broken away from precedent, I had never used a film material before, and to me that was something entirely new and different from anything I had done before.

. . . . . .

17 Q. I again ask you whether as of July or August, 1929, when you made these hand spreads, did you consider that you made your invention of the patent in suit, or didn't you? A. I think that I might answer that by saying that it was a substantial part of the invention.

Q. Then you mean by that you had not made your invention at that time? A. I don't think the invention was complete as described in this patent, 2,177,627, because those hand spreads did not carry a transparent pressure-sensitive adhesive, but the concept of a transparent film, non-fibrous, was so much of a change of pace that in a certain sense I would say that that was a very substantial part of the invention.

Colloquy

(Record pages 43 et seq.)

43 Mr. Morris: Well, I have a whole bunch of them here, and I will give them to you. You can mark them and then there won't be any question of the identification. I have a whole box load of them here. You can

have any of these that you want. It is marked on the outside of the box what it is. These are samples of all the tapes we are now making. Will that solve your problem?

. . . . . .

44 Mr, Haight: Well, do you have any sample of the rubber-resin adhesive tape such as referred to in paragraph 5 of the agreed statement of facts, Defendant's Exhibit B?

. . . . . .

Mr. Morris: It is supposed to be in here.

Mr. Haight: Well, your Honor, I don't know if we can get what we want without those witnesses. For example, here is one (indicating). Is this synthetic?

Mr. Morris: I don't know.

Mr. Haight: Or is this rubber-resin?

Mr. Morris: I don't know. I just don't know those things, but if you think they are put them in now. I haven't any question that they are authentic. I will have the witnesses later check on them and if they say OK then there won't be any question about these matters, and in the meantime you can go on with something else. The witnesses can positively identify them, or Mr. Shalita can by
45 taking one look at them, and if that is so, why they can just be marked in. I haven't any question that it is the usual type.

Mr. Haight: Well, is that rubber or is it resin?

Mr. Morris: I don't know.

. . . . . .

Mr. Haight: Well, perhaps we had better just get the witness on that.

Mr. Morris: Yes.

Mr. Haight: However, perhaps we should let the record show that these two types are so similar that none of the lawyers can tell the difference.

Mr. Morris: Well, what the lawyers can tell as to that is no test of anything.

. . . . . .

46 Mr. Morris: I will definitely have somebody here who can testify to that, your Honor.

The Court: Who can identify these various tapes you mean?

Mr. Morris: That is right.

Defendant's witness **Hubert James Tierney.**

(Record pages 47 et seq.)

Direct Examination

By Mr. Edward A. Haight:

47 Q. Will you state your name, please. A. Hubert James Tierney.

Q. Where do you live, Mr. Tierney? A. At 634 Goodrich Avenue, St. Paul, Minnesota.

Q. What is your occupation? A. I am vice-president in charge of tape manufacturing and research of Minnesota Mining & Manufacturing Company.

. . . . . .

48 A. I first entered the employment of Minnesota Mining & Manufacturing Company in about June of 1927, worked as an inspector in No. 1 and No. 2 making department. I worked in those departments through 1927 and '28, returned to the University of Minnesota in 1929, and received my degree in Bachelor of Science and Chemical Engineering in June of 1930, at which time I again entered the employ of the Minnesota Mining & Manufacturing Company. I worked from June 1930 to March
49 1931 in the abrasive research laboratory of the company. In March of 1931 I entered the research laboratory and have been continuously employed in the Tape Division since that time, since March 1931.

Q. And in about 1934 you became chief chemist in that division, is that correct? A. Yes, sir.

Q. And then in 1943 you became tape product manager with technical control of the manufacture of all the tapes? A. Yes, that is right. The technical control was also a part of my responsibilities as the product manager.

Q. And then in 1948 you became the manufacturing member in charge of manufacture of all tape, is that correct? A. That is right.

Q. And then you became a vice-president in 1952? A. That's right.

• • • • • • • • • •

50 A. Yes. When I entered the company in 1927 there were approximately 12 to 15 persons in the whole Tape Division at that time.

• • • • • • • • • •

In the laboratory at that time, in 1927, I believe that there were only about four or five persons. Dick Drew was in

charge of the laboratory. Grant Merrill, Gil Gehrenbeck, and Al Wartha, and Mr. Livermore, were the others.

Q. By Dick Drew you refer to Richard Gurley Drew, the patentee, the inventor of the patent in suit? A. Yes.

51 Q. How long did he continue in charge of the laboratory? A. Mr. Drew continued in charge of the laboratory specifically from the organization standpoint up to the point where I was made tape products manager, but he has always been regarded as the main chief or head of the tape technical matters.

• • • • • • • • • • •

54 A. Well, these types of smooth, dense, lustrous surface, non-fibrous films, were very difficult to seal
55 with the ordinary types of adhesives that were commonly used in the packaging field up to or at that time. Now those adhesives were glue or dextrine or silicate types of adhesives and had a water medium in which to keep them liquid or dissolved. These types of waterproofed cellophane, on the other hand, had waxy types of surfaces and being waterproof would not be wet by the glue type of adhesives. Accordingly, when attempts were made to use glue in sealing those films on the waterproofed cellophane, the glue would not adhere and the person did not have a satisfactory seal. Now, on the other hand, in the attempts to use the unwaterproofed cellophane, when the water was applied to the so-called unwaterproofed cellophane or normal cellofilm, the water would produce pronounced shrinkage and bad cockling or warping of the seal would result.

• • • • • • • • • • •

59 The Witness: That paragraph (p. 1, col. 1, lines 41-51) of the patent points out the distinctive difference of this type of adhesive as contrasted to the heat-

activated type, for example. The heat-activated adhesive is one which obtains its adhesion character solely through the application of heat to the adhesive. In other words, it becomes soft, thermo-plastic and adhesive by being heated. There are other types of adhesives, For example, the solvent-activated types of adhesives, and they were commonly used at that time and are so today. Those kind of adhesives obtain their adhesive character by wetting the adhesive by either water, like you do with the postage stamp, or with solvents and various types of organic solvents, gasoline, acetone or other wet solvent activating means. In that specific paragraph the patent points out that this disclosure has nothing to do with that kind of adhesive tape. This disclosure has to do with the normally tacky and pressure-sensitive type. It is normally tacky at normal temperatures, and it is pressure-sensitive, and those terms have become widely accepted and descriptive of that type of adhesive that has its adhesive character by mere application to the surface without the use of other activating means such as water, heat or the like.

60

* * * * * * * * * *

62 Q. Now, in order to explain cohesion and adhesion and what those terms mean, have you had some examples prepared in which the coherence or adherence varied from that in Defendant's Exhibit B, for example? A. Yes, I have, and I think they will help to clearly bring out that very important condition that must be present in this adhesive if it is to perform satisfactorily for the packaging uses that Mr. Drew described in this patent.

Q. All right, will you first just state what coherence is. A. Coherence means the force of adhesion or attraction for the particles of the adhesive to themselves. In other words, it is the internal strength of the adhesive, the force of

attraction of the parts of the adhesive for each other, which is referred to as cohesion.

Q. And what is adhesion? A. Adhesion, on the other hand, is the force of attraction of the adhesive towards dissimilar surfaces. For example, if the adhesive is placed on glass, the glass is a different composition than the
63 adhesive and the force of attraction of the adhesive for the glass illustrates adhesion, namely, the adherence of the adhesive to the glass surface.

Q. All right. Now will you produce an example or examples where you can illustrate the importance of having strong cohesion or having a unified adhesive coating. A. I have in my hand now some normal cellophane film that has been coated with a transparent sticky adhesive in which the adhesion is very high and the cohesion extremely low. As I attempt to unwind that half inch strip of cellophane that has been coated with this type of transparent adhesive, you will notice that the elastic strings of that transparent adhesive are stretching out at least two to three inches. Part of the string is remaining anchored to the surface on which the adhesive in this instance was originally coated, and the other part of the elastic string is remaining adhered to the back side or the underside of the cellophane backing to which this adhesive was just attached. You will notice that the back side of the backing has an adhesive deposit on it. This example, therefore, illustrates a
64 type of transparent adhesive that does not have the proper balance of adhesion and cohesion or the proper balance of elasticity and stretchiness, the balance of all four of those properties that should be present for the adhesive to perform satisfactorily for the uses mentioned as the objects in the Drew patent 2,177,627.

• • • • • • • • • • •

If an adhesive of this type is placed, for example, on glass, and then removed thereform, you will notice the removal of this strip leaves a sticky adhesive residue on the smooth surface of the glass. Now there are other examples that will illustrate that character in different degrees. Here, for example, is another roll that is not quite as much like fly paper as the example that I just showed. However, again cellophane has been utilized as the backing, that is, the normal unwaterproofed cellophane, and again that characteristic of this type of adhesive, namely, the normally tacky and pressure-sensitive type that we are talking about in the patent, stretches out upon removal from the back side of the cellophane to which it has just been in contact. You will notice that there is not as much tendency in this instance for that adhesive to offset, although again there is some, and the adhesive is stretching out like in the last instance. It is not as much like flypaper although there is bad oozing on the edge of the roll, and when the person attempts to handle this material they get their fingers pretty badly stuck up.

65

• • • • • • • • • •

The Witness: Yes. This is a transparent type of adhesive in which the cohesive strength is lower than the adhesive strength.

• • • • • • • • • •

66 A. (Continuing) Now here again is a further example of cellophane coated with a transparent adhesive. In this instance, unwinding the roll also leaves part of the adhesive on the back side and part on the surface to which it was just attached. In other words, there is extremely bad offsetting of the adhesive, in this instance from the side on which it was originally coated. The elastic strings show the condition that those in the tape art refer

to as a pasty condition, one where the cohesive strength is not as high or higher than the adhesion strength. These three examples were purely for the purpose of illustrating that you can have transparent self-sealing types of adhesives that fail to have that proper balance, and if
67 they do not have that balance, it will leave adhesive residues on the smooth surfaces to which the adhesives are attached.

Mr. Morris: May we have those three marked for identification?

The Court: Yes.

Mr. Morris: So that we will have them so marked when I cross-examine.

(Marked Defendant's Exhibits D, E and F for identification.)

• • • • • • • • • •

122 The Witness: I have just finished applying a strip of this green tape from Exhibit S onto the surface of plain 600 normal or unwaterproofed cellophane. By removing that as you would by peeling it away from a roll, there has been no tendency for that adhesive to offset. Now I can reverse that procedure and have the part that is dry pull that adhesive away from the strip that I just took from Exhibit S, and by further reversing it I can show that the strip of tape from Exhibit S again removes from the normal cellophane without showing any tendency for the adhesive to offset. Now, remember that in this instance the adhesive has been clinging to a plane flat surface of identical area, and that when I reverse and pull the sheet of 6-inch width normal cellophane from the tape, that cellophane had the disadvantage of having its surface come up

against the dry adhesive; and you will notice that in that instance the contact of this 6-inch width sheet of normal cellophane, with that dry adhesive surface, is not 100 percent equivalent because there are a few air bubbles. But despite that fact the angle effect is such as to enable
123 that to pull it away from the half inch strip on which the adhesive was originally coated.

• • • • • • • • • • •

140 The Court: Mr. Tierney, I would like to ask you the same question that I asked Mr. Cohen.

The Witness: Yes, sir.

The Court: Is there any means you have of identifying that tape as 3M tape, other than seeing its content or that there are some markings on the core?

The Witness: Well, it is on the plastic core, the
141 tape, and I secured it and I know that it is our commercial manufacture.

The Court: There is no doubt or there is no question in my mind as to that, but I really wanted to find out for my own edification as to it. For instance, if I gave you two pieces of tape, this particular sample, and a piece of tape that I just picked up indiscriminately and being something that was admittedly manufactured by Tech Tape, could you or could the buying public distinguish between them?

The Witness: The buying public certainly could not. In fact, I could not without a rather exhaustive chemical analysis, and even after the chemical analysis I don't know whether I could distinguish between the "Tuck" rubber-resin type of transparent cellophane tape and the Minne-

sota Mining rubber-resin type of transparent cellophane tape, and I doubt whether one could distinguish between the two.

• • • • • • • • • • •

151 The Witness: Now, those ingredients may be mixed with a solvent according to the method described on page 3, column 2, method A or method B, and this gives a liquid transparent adhesive. The transparent adhesive resulting from the mixture and solution of those ingredients in the proportions as indicated in example C of the patent were then coated on plain, normal, unwaterproofed cellophane and by the knife-coating method as referred to on page 5 of the patent, column 2, at about line 40 and further on at that point.

Q. Mr. Tierney, do you have an example of such a tape produced from the ingredients which you have just identified? A. Yes, I do.

Q. Now, this is the sample which you produced in order to have a sample available here for this trial, is that correct? A. It is. I now hold in my hand a roll of trans-
152 parent cellophane film-backed pressure-sensitive adhesive tape, made according to the formula of example C of the patent. I have just unwound a strip roughly about 15 inches long, and it will be noticed that there is no tendency for the adhesive to offset onto the backside of that cellophane. Now, this cellophane was not primed. The adhesive was coated directly onto normal cellophane film. I again place the tape on this heavy 2½ pound glass, showing that it will lift it off the surface and upon removing the tape from the surface there is no adhesive residue that remains. It will pick up this second glass plate by just lightly touch-

ing it to the surface. Again upon removal from the surface there is no adhesive residue remaining on the surface.

Mr. Haight: I ask that that roll of tape to which the witness has just testified be marked for identification as Defendant's Exhibit EE.

(Marked Defendant's Exhibit EE for identification.)

• • • • • • • • • • •

162 The Witness: Now, that adhesive, Example E, was reproduced and the adhesive coated on plain transparent unprimed normal cellophane film, knife-coated according to the procedure at page 5 of the patent, and
163 I now hold in my hand an example of such tape that has maximum transparency as indicated by Drew or the patent, and again placing it on this plate it holds it well supported without any tendency for that adhesive to offset, or any adhesive residue remaining on the surface of the glass plate. Now, that is the 2½ pound glass plate. Again just lightly touching it on to this other glass, again it picks it up without any pressure on the tape at all but causes it to adhere to that surface of the smaller glass plate and there was no adhesive residue remaining on the back side of the cellophane as I unwind that roll of tape, this Example E adhesive of the patent on unprimed normal transparent cellophane.

Mr. Haight: I ask that it be marked as Defendant's Exhibit KK.

• • • • • • • • • • •

165 Q. Now the patent continues at page 3, column 1, about line 55, and I quote—I wonder if maybe it would not be better, Mr. Tierney, to ask you to explain the portion beginning on page 3, column 1, line 55, way over

to the top of the second column, line 3, reading such portions as are appropriate. A. Starting with line 55, there, it is indicated that the rubber base and the resin base determine the tackiness exhibited by the finished product. That relationship of the rubber and the resin together, coupled to a certain extent with the treatment that
166 is given to the rubber, determines the adhesive character of the adhesive. Now reference was made to milling the rubber. Rubber is a high molecular weight organic polymer built up of the structural unit of isoprene. When you mill the rubber you break down the molecular weight or you decrease the molecular weight to a certain extent, and that tends to increase the tackiness. It is further pointed out there, that is, line 64:

"the greater the quantity of the tack producing phase"—

and just previous to that is indicated that tack producing phase in this particular example is the resin and the paraffin oil, if it is utilized, it is indicated there that the paraffin oil can be eliminated—

"that the greater the quantity of the tack producing phase that is added to the rubber, the greater the tackiness exhibited in the rubber base adhesive."

* * * * * * * * * * *

168 Q. Now will you continue, and perhaps you had better read in part on line 60 to about 73 of column 2, page 3, and first state in general what subject matter does this bring up. A. This section of the patent has to do with the indication of the use of a primer where it may be desired to use a primer. I will read from the patent, starting at line 60:

"Where considerable unification is desired between the adhesive layer and the backing material, to assure proper anchorage of the adhesive layer with the backing material, thereby assuring satisfactory unwinding or separa-

tion when the composite is formed into rolls or stacks, it is preferred to first coat the sheet of gelatinized cellulosic material with a priming composition."

Now the primer acts as a factor of safety in improving the force of anchorage of the adhesive to the transparent film.

• • • • • • • • • •

173 Mr.Haight: I will ask that it be marked for identification as Defendant's Exhibit LL.

(Marked Defendant's Exhibit LL for identification.)

Q. Can you demonstrate that roll. A. I have just
174 placed it on the surface of this small glass without any pressure whatsoever and it has picked the glass off the surface of the table here. As I remove it from the surface again, there is no adhesive residue remaining on the glass. There is not the minutest trace of an adhesive residue remaining on the back side of the cellophane as I unwind this tape. I believe Mr. Shalita just examined the roll. Do you care to examine it again?

The Court: What is that?

Mr. Haight: That is example C.

The Court: Example C, made with a primer.

The Witness: Yes.

Mr. Haight: With the primer.

• • • • • • • • • •

Cross Examination

By Mr. Morris:

• • • • • • • • • •

202 Q. When Drew filed his application for the patent in suit, the adhesive was well known, wasn't it? A. Yes, it was.

Q. There was nothing new in that? A. Adhesives that had, of themselves, this area of normally tacky and pressure-sensitive character were known and in use years before this Drew patent was initially filed, yes.

Q. And the cellophane was old, too, that was known? A. Yes.

Q. Drew didn't have anything to do with making cellophane? A. No.

Q. So we had both of those elements of the patent, the adhesive and the cellophane, old in the art before Drew came into the picture. Now are we to understand from
203 your testimony this morning, your analysis of the examples, that the trick of the thing or the art of the thing lies in getting exactly the right adhesive before you come out with this type of tape that we all want and that the Drew patent is talking about? A. You cannot get the article or the Drew patent if you have an adhesive, for example, where the cohesion is lower than the adhesion. I think that was what was intended for only illustrative purposes in those first examples, I think the Exhibits D, E and F that were shown, purely for illustrative examples of the adhesives that did not possess the physical character comparable to the physical character of the adhesive example C or example E.

• • • • • • • • • • •

287 The Witness: This is waterproof surgical tape that came on the market commercially in the U. S. about 1937 or 1938 or 1939. It picks up a light weight, so it is a normally tacky and pressure-sensitive adhesive, as I have admitted. What it shows I don't know, because this commercially is a product that was not on the market

288 in 1931. We have an example of unwaterproof tape that was on the market in 1931 and at about 1936 or 1937—and I shall be glad to conduct the tape if you so desire.

Mr. Haight: That is Exhibit 12, I believe, isn't it?

Q. This Exhibit 11, it did the job as well as the 3M cellophane tape, didn't it? A. Approximately as well on this light glass plate, yes.

Q. Well, let us just, for the sake of interest here, try and see what it will do on this other glass plate. I haven't any idea, but you try it. A. All right.

Q. Not that it makes much difference. A. All right.

Q. You had it stuck to the paper down there, didn't you? A. Well, I will try it again.

Q. Yes. A. I will try it again.

Q. All right. A. Just a minute now.

Q. Take it lightly now and don't yank it up that way. A. Well, would you care to remove it for me?

289 Q. No. I would rather you do it. A. Is this satisfactory the way I am unwinding the roll?

Q. I think it is admirable. Now lift it easily and don't jerk it. A. No.

Q. It does not lift it, does it? A. It does not move the plate.

* * * * * * * * * *

296 Q. Was this adhesive tape (PX-12) that was on the market in 1931? A. Yes, that is an example of unwaterproofed surgical tape similar to what was on the market in 1931.

Q. Tape a piece of that off and try that in the same way we have been trying these other pieces.

The Court: Take it about the same width.

A. This is a 3-inch width, but we can try it even on the 3-inch width and show that dropping that 3-inch
297 width on this lightweight glass plate there is no immediate adherence such as to adhere to that lightweight glass plate. I can put even the 3-inch width on this heavy glass plate and rub it down and pull it up the same way, even the 3 inches will not move the glass plate. This is the unwaterproofed type of surgical tape.

• • • • • • • • • •

311 Q. So when you take this adhesive which was old in 1929 because it was being used on masking tape, and you take that and coat it on a masking tape backing and then also coat it on a cellophane film in a similar manner, you would simply come out with what you would naturally come out with, dependent upon the backing that you use, isn't that right? A. You come out with a masking adhesive on cellophane backing. You don't come out with a transparent cellophane film backed tape nor do you come out with a colored cellophane film backed tape.

• • • • • • • • • •

322 A. But you take on page 3 of the patent (1,760,820), an elaborate description is given of the method of treating that paper with glue and glycerine solutions, for example, so as to cement or bond those fibres together, so that when the pressure-sensitive adhesive is coated on the surface of the treated paper and that composite wound up into roll form and subsequently unwound, the paper will not split; that is, the fibres will not split apart and be deposited on the surface of the adhesive.

Q. And in that way the fibers will be covered to a degree by the glue and glycerine? A. Well, he points out very specifically in the treating of the paper that one should definitely avoid an excess, and he points out there
323 that crepe or bibulous toweling is the preferred type of paper for this backing for masking tape. Now that type of paper has not only a very porous surface but it also has the additional advantage of the high points of the crepe helping to minimize the area that the pressure-sensitive adhesive back has when it is in roll form, so that the unwinding effort in unwinding a roll of crepe paper masking tape is minimized as a result of the adhesive only contacting the high points of the crepe on the back side of the treated toweling paper.

• • • • • • • • • •

336 Q. So on the surfaces of the parchmentized paper when completed you would have a cellulosic smooth gelatinized material? A. No, you would not.

Q. Well, what part wouldn't you have that? A. You could readily detect what the surface of your paper is by looking at it with a magnifying glass or a binocular microscope. You would have apparently a rough and porous surface, certainly rough and porous persenting a large area as contrasted to the smooth lustrous glasslike surface of cellophane. Now that can very readily be seen by using a microscope of only about 15 or 17 diameter magnification. As you will look at the paper under a microscope, that paper looks very much like it is a shredded wheat biscuit, or like these biscuit wafers that are utilized with cheese or with hors d'oeuvres, and you notice that appearance only at 15 or 17 diameter magnification, where it
337 can be readily seen. And that appearance will show up with some roughness not quite as far as the shred-

ded wheat biscuit offers, but it will show up on parchmentized paper, the commercial type of parchmentized paper.

• • • • • • • • • • •

340. Q. If you as the expert that you are were standing over my shoulder and looking over my shoulder in the laboratory and I had a piece of this parchmentized paper of which Drew speaks in his masking tape patent, Exhibit 18, and I had a piece of normal du Pont cellophane, and I took some adhesive from a container and spread it on the parchmentized paper and then I spread the same adhesive on the cellophane, would you as an expert say that I was using backing of the same class of material? A. No, they are not the same class of material.

Q. All right. A. One is a paper and the other is a transparent film. One has no fibers in it at all. It has glass-like surfaces. Paper, parchmentized paper,
341 has rough surfaces as you can see and anybody else can by looking at it with relatively low magnification, and it presents a great deal of area for the adhesive to hang on to, not the same problem as trying to get an adhesive to hang on to smooth glasslike surfaces. It is about like a plasterer who tried to plaster on the surface of glass. He has to use a metal lath or something for the plaster to dig in and get mechanical anchorage.

• • • • • • • • • • •

469 Q. Now, Mr. Tierney, in the patent in suit the Example A adhesive has a greater amount of rubber than it does resin, doesn't it? A. Yes.

Q. And in Example B there is no added resin other than that which is included in the Mexican or wild rubber; that is true, isn't it? A. Yes.

Q. So that Example B, leaving out the zinc oxide pigment, is essentially a rubber solution? A. No, it is a solution of rubber along with resin, because wild rubber contains a high amount of resin content; that is, the Mexican type of wild rubber.

• • • • • • • • • • •

358 Mr. Morris: Now, your Honor, it will be just as easy for me to read this stipulation in at this point and if there is no objection I will do that.

The Court: All right.

Mr. Morris: (Reading) ". . . For a substantial period of time prior to the grant of the patent in suit, Minnesota Mining placed patent markings on its cellophane pressure-sensitive tape, transparent and colored, under the designation 'Made under one or more of the following United States patents,' or some similar designation; that upon the issuance of the patent in suit that patent was added to
359 the group of patents included in that marking; and that a couple of years later, generally in or around the year 1942, Minnesota Mining then discontinued the prior practice of using the same patent markings on all patented tapes and created a plurality of classes of patent markings, and at that time a whole group of patents which had previously been included on the cellophane tape were dropped from the patent markings. Among the patents included in the aforesaid markings from the time prior to the date of the issuance of the patent in suit until a couple of years after its issue, was the masking tape patent, Patent No. 1,760,820 or its reissue, number 19,128."

• • • • • • • • • • •

470 Q. All rubber has some resin in it, doesn't it, all natural rubber? A. It is referred to as resin, yes.

Q. So in Example B the amount of rubber is greater than the amount of resin? A. Yes.

• • • • • • • • • • •

Q. Do all crops of Mexican rubber have the same amount

of resin in them? A. No, but all of them have considerably more than the East Indies type of plantation rubber.

Q. How much does that have in it? A. The East Indies type of planation rubber I believe has no more than about 2 to 3 per cent.

* * * * * * * * * *

697 Q. Will you explain, then—I don't understand it. I would like to ask you this question, if I may be permitted. Will you explain how there is a different surface area between the two sides of the creped paper of the masking tape as compared with the two sides of the cellophane tape that is used in making the pressure-sensitive adhesive tape by 3M? A. In the manufacture of creped toweling paper, one side is what they call the crepe side and the other is the towel side. One side has somewhat higher ridges than the other side. Now the significant point is that in coating the liquid pressure-sensitive adhesive on one side of the treated paper, the treated toweling, for example, the wet adhesive solution contacts every bit of the fibrous surface area of the face side and then that solvent is evaporated as the tape is placed through the drying oven, and when it comes out of the drying oven and is wound up in the jumbo roll the adhesive, the dry pressure-sensitive adhesive, and by that I mean the pressure sensitive adhesive solids that have had the solvent completely removed, contacts the back side of that paper, but it does not flow into the toweled back side area of the paper. Now in the case of the cellophane the two surfaces are identical;
698 and on a great majority of the cellophane rolls the adhesive area that is in contact on the face side is exactly equal to the adhesive area that the back side presents. There is no difference in area in that instance. There is no chance to get the advantage on one side in contrast

to the other. In the case of the creped paper masking tape there is a vastly different thing involved. You have much greater surface area of the face side that the wet adhesive contacts. And, then, to add additionally to that, the dry pressure-sensitive adhesive does not contact one hundred per cent of the area on the back side of the paper because it can't do it. And it can be easily shown by unwinding the roll of the crepe paper masking and you can see where the adhesive has been in contact with the back side and it is visible. In fact, you could take the crepe paper masking tape and press it against a sheet of carbon paper and peel it away and see that the adhesive has not been contacting the toweled area of the back side of the paper masking tape.

* * * * * * * * * *

Excerpts from Plaintiff's Exhibit 28

Deposition testimony of **H. J. Tierney** as an adverse witness.

(Record pages 3506 et seq.)

3506 "Q. You are familiar with the United States Kronstein patent 1,944,562, are you not? A. Yes, sir.

Q. Do you have a copy of it there with you? A. I think I do.

Q. That patent discloses the use of cellophane as part of the article that is described in the patent, doesn't it?

3507 A. Yes.

Q. It also discloses a rubber-like, stretchable, water-insoluble insulating material united to one side of the cellophane, doesn't it? A. It discloses a number of

things that he indicates as suitable for producing the article that his patent has reference to, yes.

He describes a great number of materials that adequately satisfy and produce the article he describes in this patent, which is pertaining to electrical insulating material, and which by his disclosure is an improvement on the varnished cambric type of material that has been utilized in the industry as insulating material.

His procedure, he states, improves on the previously known varnished fabrics by placing the electrical insulating varnishes or coatings of cellulose acetate on cellophane rather than by placing such coatings on woven fabrics, such as had been previously the prior art procedure.

He does mention that rubber and varnishes have been commonly utilized as electrical insulating coatings,
3508 and rubber, vulcanized rubber, is certainly stretchable.

He indicates that such coatings as he has reference to should be 'moreover oilproof' in producing the product that he describes.

Now that reference from his patent appears on page 2, column 1, lines 17 and 18, where he says:

> 'The product obtained in the manner described is moreover oil-proof'."

* * * * * * * * * *

3518 "Q. Going back to the Kronstein patent, No. 1,944,562, on which you were interrogated, in your opinion would a mixture of slow drying varnish and rubber, even though tacky for some time, have a stable degree of tackiness? A. It definitely would not have a stable degree of tackiness or pressure-sensitive adhesiveness; and I believe that the Kronstein patent where he utilizes the

3519 term 'any desired degree of adhesiveness' is broadly referring to the fact that liquid cements can vary in their degree of adhesiveness or, like a dry postage stamp, can vary in its adhesiveness depending on the amount of moisture or solvent that is present with the adhesive; for, on page 2, column 2 of this same Kronstein patent, No. 1,944,562, in the section beginning at the bottom of column 1, page 2, he states:

> 'and it may be employed moreover for the manufacture of finished articles, such as electrically insulating tubes and other pieces of insulation, which latter, may for instance be worked into finished articles by pasting layers of the cellulose composition with a liquid insulating material, such as adhesive insulating varnish, or by a solution of artificial resin or the like,'—

Now there he very evidently refers to using a liquid type of adhesive material.

Q. You used the phrase 'having any desired degree of adhesiveness'. That is found in the Kronstein patent, is it not? A. Yes, it is.

3520 Q. And where in that patent? A. On page 2, column 1, line 39.

Q. Speaking of the same Kronstein patent, would the product there have more cohesion than adhesion at any time when it is markedly tacky? A. While the adhesive material that he has reference to is tacky its cohesiveness would definitely be lower than its adhesiveness. In other words, it would be similar to the cellulose acetate China cement, that is, where cellulose acetate is dissolved in amyl acetate and before it has completely dried, the wet tacky adhesive material may be used for cementing things together. When that adhesive material is tacky its cohesiveness is less than its adhesiveness."

. . . . . .

Testimony of **Kenneth E. Penney**, called as a witness by Minnesota.

Direct Examination

By Mr. M. K. Hobbs:

3529 Q. What is your profession? A. I am manager of audio and visual services for Minnesota Mining & Manufacturing Company.

3530 Q. Does that have anything to do with photography? A. Yes.

* * * * * * * * * * *

Q. Ever since that employment have you been the head of the photographic department? A. Except for a short period at the beginning, less than a year, yes.

* * * * * * * * * * *

Q. Have you had various jobs or positions taking pictures? A. Yes, sir.

Q. What was the first one? A. The first major one was the DeKalb Agricultural Association at DeKalb, Illinois.

Q. Did you in that job take microphotographs? A. Yes.

* * * * * * * * * * *

3531 Q. And then what was your next job? A. With Twin City Ordnance Plant.

Q. Was that a Government job? A. That is right. It is a Government plant, operated by a private individual, yes.

* * * * * * * * * * *

Q. Did you have occasion in either of these employments to use a microscope? A. Yes, I have.

Q. And to make microscopic pictures? A. I have.

Q. Now after the Twin City Ordnance job, what was your next job? A. With Minnesota Mining.

3532 Q. And you have been there since 1944? A. That is correct.

• • • • • • • • • • •

Q. Are you a member of any organization or association that has to do with photography? A. Yes, I am.

Q. What is it, please? A. It is the Industrial Audio Visual Association.

Q. Are you an officer in that organization? A. Yes, I am.

Q. Mr. Penney, in or about the year 1945 you took some pictures for use in the suit of Minnesota Mining & Manufacturing Company vs. International Plastics Corporation; those pictures were to show the surface characteristics, the topography, if you please, of surfaces of various materials. Do you still have those pictures? A. I have a set of them, that is correct.

• • • • • • • • • • •

3534 Q. Well, was the subject of which you took the picture, the specimen, magnified? A. Yes, sir.

Q. By what means? A. By using a microscope, microscopic lens, extension bellow.

Q. How great was the degree of magnification? A. Approximately 40 times.

Q. Were these stereopticon or 3-dimensional pictures that you took? A. They were.

Q. What is the meaning of the expression 3-dimensional pictures? A. I believe it would be easier to describe it if I would say that an ordinary flat surface photograph has

length and width. The 3-dimensional photograph also has depth to it, if used in the proper machines.

Q. What is the purpose of taking a 3-dimensional picture?

3535 A. Are you referring to these that I have taken?

Q. Any 3-dimensional picture. A. To show the third dimension, the depth to it.

• • • • • • • • • • •

3539 Q. Mr. Penney, Mr. Morris just said that this was an optical illusion, so that leads me to ask you is normal vision, normal binocular vision, stereoptical? A. Normal binocular vision is stereoptical.

Q. And that is the way people see, isn't it? A. That's right.

Q. And that is why we have two eyes, isn't it? A. Correct.

Q. So that we can see a subject from two different points of view? A. That's right.

• • • • • • • • • • •

3553 Q. Now, have you taken some more stereopticon slides more recently, Mr. Penney? A. Yes, I have.

Q. And they were of what? A. They were of Patapar vegetable parchment.

Q. And what else? A. Normal cellophane.

Q. How many slides altogether? A. I have three slides, sir.

Q. Two of the parchment and one of the cellophane? A. Correct.

• • • • • • • • • • •

3559 Mr. Hobbs: Now if the Court please, that finishes our exhibition of these slides. I want next to have the witness use the microscope on one or two specimens. It takes some time to set that up of course. I don't want to suggest that we close now, but if it is the desire of the Court—

The Court: We can come back after dinner.

* * * * * * * * * *

3561 Q. Now, Mr. Penney, when you get something ready for observation there, you let us know, and please don't let us hurry you. A. I am ready with a piece of parchment now.

Q. Let me ask you a question or two first before the testimony or the demonstration begins. A. Yes, sir.

Q. This is the microscope that you rented in the City of New York for the purposes of this suit? A. I did.

Q. Where did you rent it from? A. At the Atlas Surgical Company.

Q. And is this microscope of such a kind that two people can look at the subject at one time? A. Yes, sir.

Q. Now, what magnification does it have? A. At the present time I have an 80 magnification.

Q. Can you increase that? A. I can double that to 160 magnification.

Q. Well, I suggest now that we look at the present specimen in there which you say is parchment from Plaintiff's Exhibit 21, the vertical edge under the 80 power magnification. A. Yes, sir.

* * * * * * * * * *

The Court: We can both look at it.

The Witness: That's right. Right through here, Mr. Morris. You can correct this eyepiece if you wish, Mr. Morris, for your own eyes, without the glasses.

Mr. Morris: What is this thing here?

The Witness: That is a piece of parchment.

• • • • • • • • • •

3564 Q. Did you find an unevenness in the surface there that you can point out? A. Yes.

The Court: It is a marked unevenness.

The Witness: You see this edge right there is the edge referred to.

The Court: The edge on both sides all along.

The Witness: You might be able to adjust this and probably bring it in better sharpness for you.

The Court: I think I see it well.

• • • • • • • • • •

3573 The Court: Yes, and Mr. Penney, we will call him the x-ray technician and Mr. Tierney we will now call him the MD, and he is now going to tell us what there is or give his views anyway.

Mr. Morris: Yes.

• • • • • • • • • •

Testimony of **H. J. Tierney**, recalled as a witness by Minnesota.

Direct Examination

By Mr. Hobbs:

Q. Now, Mr. Tierney, will you state on the record what you have seen as you looked through this 80 power microscope, at the vertical edge of a piece of parchment from Plaintiff's Exhibit 21?

• • • • • • • • • • •

3574 A. I see that both surfaces of the parchment paper are noticeably jagged and rough. They definitely could not be described as smooth like the surface of glass, for example. Associating this particular cut edge, showing with the surface view, which I believe you plan to show as the next example with this same particular microscope—

Q. That is right. A. —and having that associated with this cut edge view the mind tells you that some of those jagged projections that you are looking at are fibers at the surface of that parchment paper.

Testimony of **Paul Shalita**, recalled as a witness by Technical.

Cross Examination

By Mr. Haight:

• • • • • • • • • • •

3593 The Court: So that roughly with a quarter of an inch square area we saw quite a lot of irregularities, didn't we?

The Witness: Yes. The roughness, the up and down to it, yes, your Honor.

The Court: As compared to a piece of cellophane which we didn't see on its edge but which we saw on a flat
3594 surface, or as compared to a piece of glass, which we didn't see, but under the machine—but I imagine on the machine it would likewise be smooth; it is a relatively rough piece of paper, isn't it?

The Witness: In comparison to the two.

The Court: Yes. It is relatively rough.

The Witness: The parchment appears to be rougher because of—

The Court: Not appears to be rougher, but it is actually a very rough piece of paper. It is like having a flat piece of glass in your hand and a broken piece of glass with a lot of jagged edges, isn't it?

* * * * * * * * * * *

3650 Q. Now we have a little strip of cellophane here, here is a strip of your cellophane, and I am going to ask you to analyze that surface. Do you know what a brush analyzer is, by the way? A. It is an experiment for measuring highs and lows.

Q. That is, you have a little needle with a diamond point that you run over a surface and you just, at periodic intervals, measure the high as against a normal or standard? A. I don't know the mechanics. I have heard of the brush analyzer.

Q. Since we don't have one in court, I have got a
3651 home-made one here. Here is a match with a needle in it. Have you ever analyzed the surface of a material using a needle? A. In what way do you mean?

Q. Well, I am going to show you here first, then I will

ask you to do it. Now I am taking off a piece of parchment from Defendant's Exhibit 21, and then I have got a piece of cellophane; I am holding the edge at the top and I am going to take this needle now, which is stuck in a wooden match, and I am going to hold it lightly so that any vibrations that come from this cellophane that I am now stroking with the needle will be transmitted to my fingers; and I feel none. You hear no noise, do you? Now I am going to do the same thing on the parchment. Do you hear that scraping sound? A. Yes.

3652 Q. Now I will ask you to do it, first with the cellophane.

(The witness complies.)

Q. Now I will ask you to do it with the parchment.

(The witness complies.)

Q. Do you hear the sound on the parchment and not on the cellophane? Is that right? A. I do.

Q. Did you, in your fingers, detect a vibration as you brought that needle down on the surface? A. Yes, I could feel some vibration.

Excerpt from Plaintiff's Exhibit 181-T

Durex Opposition to Rado German Application 75,969

R. 75,969 / 47f 16 March 1933
RADO

To the German Patent Office

On behalf of the Firm Durex Abrasives, Inc., Dusseldorf-Reisholz, the attention of the German Patent Office is directed . . .

Excerpts from Plaintiff's Exhibit 189-T

Durex Opposition to Rado German Application 75,969

R/Fr. 11 November 1933

R. 75,969 XII/47F To the
RADO German Patent Office

• • • • • • • • • •

We should like to point out that the application has subsequently been broadened in a form which is not admissible. The original application shows in Paragraph 2 the indication of rubber solution merely as an adhesive substance for the adhesive tape. But when we turn to the description of a "suitable adhesive substance" in the third paragraph, we suddenly find that this term does not mean an adhesive substance to be used for the fixation of the sealing band to the said tubes and hoses; quite contrary there is the indication of an intermediate layer of adhesive substance for internal firm coherence within the band itself, especially for strong unification with the reinforcing bases of the band, regardless of whatever material these bases may be derived from. On the other hand the term "suitable adhesive substance" does not make sense at all. The suggestion of an unsuitable adhesive substance will hardly ever be presented by anybody.

If however the applicant is trying to do just this, then we have an improper broadening of the claim 1 on hand, when he for example states: "that the base of the *plastic adhesive substance*, as for instance rubber solution, is formed by a non-fibrous cellulose". Actually and originally the applicant revealed only one single adhesive substance, that is the rubber solution, and this compound is no "plastic" adhesive substance in its exact technological meaning.

Every adhesive substance has indeed to be plastic at the moment of adhesion. Those skilled in the art will consider only those adhesives as plastic which nowadays fall under the category of continuously adhesive substances and which stick by simple pressure. Rubber solution however does not belong to this group as the normal solution will lose its solvent agents by volatilization rather quickly, and hence will be deprived of its adhesive quality; this fact is for example well known to every bicycle rider.

The supplementarily broadened application presents a rather well-plotted attempt to have items protected which never were part of the applicants invention.

Excerpts from Plaintiff's Exhibit 190-T

Opposition to Rado German Application 75,969 by Durex (incorrectly labeled "Minnesota")

April 28, 1934

R. 75,769 XII/47f XI B. 307/33 To
Rado German Patent Office

. . . . . .

It has to be emphatically opposed that the applicant changes the subject of his invention after the publication at his own liberty.

His brief dated July 2, 1930 states very distinctly:

"The invention is expressly concerned with the detection of a revolutionary new field of application for this material which is especially the sealing of damaged tubes or hoses at leaking spots."

However, the applicant produces only one recommenda-

tion of an aviation group supporting the asserted advantage of the subject of his invention, where nothing is said on the sealing of tubes or hoses and merely the fact is mentioned that the invention product has been used instead of adhesive plaster, which, of course, creates a completely different situation.

The opposition against the change of the application contents has to be raised in another view.

In the original application records and later on too, the applicant considered as adhesive substance rubber solution only so that absolute identity with the adhesive of the French Patent 433,999 was presented. Then on January 22, 1931 the older Patent Application M 110,336 IV a/75c of the Minnesota Mining and Manufacturing Company was published. Very soon, that is on February 3, 1931, we find in the present application files, page 2, in the middle, the wording that rubber solution "or the like" could be used according to the application and the protocol of the hearing dated November 27, 1931 shows for the first time a plain reference to a "plastic adhesive substance".

There is no particular argument necessary that this constitutes a completely non-admissible broadening of the original meaning of the application considering the above given declaration of the applicant that his invention relates only to the use of a generally known material for the special purpose of sealing tubes and hoses.

Excerpts from Plaintiff's Exhibit 191-T

Rado German patent Application 76,554

Patent Application R 76,554 Published November 28, 1935
L. Rado Patent Office 730528 • 4 Nov. 1935
Berlin

SEALING-TAPE FOR SHEETMETAL PACKAGES

• • • • • • • • • • •

PATENT CLAIMS

1. Sealing tape for sheetmetal packages, where led and bottom is sealed by a tape, characterized by the fact that the joint between cover and container has been covered by a strip of non-fibrous skin of cellulose—commonly known for packaging purposes—using a known adhesive rubber solution.

Excerpts from Plaintiff's Exhibit 193-T

Opposition brief of Minnesota to Rado German patent application 76,554

June 9, 1936

To the German Patent Office

R. 76,554 XII/81c
Rado

Opposition: Minnesota Mining & Mfg. Co.

Supplementary to the opposition dated January 28, 1936, the following arguments are herewith presented after completed examination of the file of the application.

The presented description and claims of the above ap-

plication dated December 12, 1928, were distinctly limited to an adhesive tape which consists of a *metal foil* in conjunction with a non-fibrous, transparent cellulose skin.

Furthermore, the application was originally presented as an addition to the application No. 75,969 of the applicant; this original application was however, entirely rejected in the meantime by the Board of Appeals. The applicant admits in the original form of his present application that the subject of his older application was conventionally known but now desires to have the same subject protected according to claim 1 through 3 of his present application. The original form of the present application No. 76,554 presents as the only new feature the combination of a metal foil with a non-fibrous cellulose skin.

In the present application amended claims were presented on November 6, 1929, all of which were limited to the use of a metal foil in conjunction with a non-fibrous cellulose skin. That makes it therefore very plain that the originally submitted form of the application described merely a combination of a metal foil with a non-fibrous cellulose skin and that the applicant did not intend—as shown in the present application—to have an adhesive tape protected which is not limited to the use of a metal foil; that he did not intend to have said rights protected was even more evident as the older application, pending at that time, contained a description which did not relate to adhesive tape where the metal foil as an important part had been eliminated.

The check of the files laid open for opposition shows that again on August 22, 1930 amended claims were filed which relate to the use of metal foil in the same way. Heretofore the applicant revealed and claimed nothing but adhesive tapes with metal foil during the years 1928, 1929

and 1930 and thus also did not broaden the present application. Still on March 5, 1931 the advantages given by a combination of metal foil with non-fibrous cellulose were the subject of his presentation.

In view of the application No. 75,969 still pending at that time, the examination of the present application was suspended until 1934.

Now on December 12, 1934 the applicant filed amended descriptions and claims requesting that this present application be considered separately apart from the still pending application No. 75,969. *Here for the first time the claims were not limited to the use of a metal foil.* Thereby the present application is expanded essentially in contrast with the originally filed form; hence the examination board objected correctly on September 27, 1935 to this amendment as an inadmissible expansion of the original records on the basis of the fact that the original application was limited to the combination of a cellulose skin with a metal foil. The examination board requested consequently a corresponding limitation of the claims in the present application.

• • • • • • • • • • •